Science For A Better Life

ANNUAL REPORT 2012



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Science For A Better Life

Bayer is a global enterprise with core competencies in the fields of health care, agriculture and high-tech materials.

As an innovation company, we set trends in research-intensive areas. Our products and services are designed to benefit people and improve their quality of life. At the same time we aim to create value through innovation, growth and high earning power.

We are committed to the principles of sustainable development and to our social and ethical responsibilities as a corporate citizen.



SINCE 1863 – INNOVATING FOR THE FUTURE

Time and again over the past 150 years, Bayer inventions have helped improve people's quality of life. Some of the company's principal innovations in the fields of health care, agriculture and high-tech materials are briefly described in the section "150 Years of Bayer."

INTERNET

Interactive journey through our company's history
WWW.BAYER.COM/EN/150-YEARS-OF-BAYER.ASPX

Key Data

[Table 1.1]

	2011	2012	Change
	€ million	€ million	%
Bayer Group			
Sales	36,528	39,760	+8.8
EBIT[1]	4,149	3,960	−4.6
EBIT before special items[2]	5,025	5,671	+12.9
EBITDA[3]	6,918	6,920	0.0
EBITDA before special items[2]	7,613	8,284	+8.8
EBITDA margin before special items[4]	20.8%	20.8%	
Income before income taxes	3,363	3,248	−3.4
Net income	2,470	2,446	−1.0
Earnings per share (€)[5]	2.99	2.96	−1.0
Core earnings per share (€)[6]	4.83	5.35	+10.8
Gross cash flow[7]	5,172	4,599	−11.1
Net cash flow[8]	5,060	4,532	−10.4
Net financial debt	7,013	7,028	+0.2
Capital expenditures as per segment table	1,666	2,012	+20.8
Research and development expenses	2,932	3,013	+2.8
Dividend per Bayer AG share (€)	1.65	1.90	+15.2
HealthCare			
Sales	17,169	18,612	+8.4
EBIT	3,191	2,154	−32.5
EBIT before special items[2]	3,367	3,736	+11.0
EBITDA[3]	4,502	3,815	−15.3
EBITDA before special items[2]	4,702	5,068	+7.8
EBITDA margin before special items[4]	27.4%	27.2%	
Gross cash flow[7]	3,254	2,614	−19.7
Net cash flow[8]	3,357	3,543	+5.5
CropScience			
Sales	7,255	8,383	+15.5
EBIT	562	1,539	.
EBIT before special items[2]	1,168	1,526	+30.7
EBITDA[3]	1,215	2,033	+67.3
EBITDA before special items[2]	1,654	2,008	+21.4
EBITDA margin before special items[4]	22.8%	24.0%	
Gross cash flow[7]	900	1,320	+46.7
Net cash flow[8]	691	899	+30.1
MaterialScience			
Sales	10,832	11,503	+6.2
EBIT	633	597	−5.7
EBIT before special items[2]	589	629	+6.8
EBITDA[3]	1,215	1,224	+0.7
EBITDA before special items[2]	1,171	1,251	+6.8
EBITDA margin before special items[4]	10.8%	10.9%	
Gross cash flow[7]	939	947	+0.9
Net cash flow[8]	775	739	−4.6

In some cases, the sum of the figures given in this report may not precisely equal the stated totals and percentages may not be exact due to rounding.

[1] EBIT = earnings before financial result and taxes

[2] EBIT before special items and EBITDA before special items are not defined in the International Financial Reporting Standards and should therefore be regarded only as supplementary information. The company considers EBITDA before special items to be a more suitable indicator of operating performance since it is not affected by depreciation, amortization, impairments or special items. By reporting this indicator, the company aims to give readers a clearer picture of the results of operations and ensure greater comparability of data over time. See also Combined Management Report, Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."

[3] EBITDA = EBIT plus amortization and impairment losses on intangible assets and depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals. See also Combined Management Report, Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."

[4] The EBITDA margin before special items is calculated by dividing EBITDA before special items by sales.

[5] Earnings per share as defined in IAS 33 = net income divided by the average number of shares. For details see Note [16] to the consolidated financial statements.

[6] Core earnings per share are not defined in the International Financial Reporting Standards. The company considers that this indicator gives readers a clearer picture of the results of operations and ensures greater comparability of data over time. The calculation of core earnings per share is explained in the Combined Management Report, Chapter 7.3 "Core Earnings Per Share."

[7] Gross cash flow = income after taxes, plus income taxes, plus financial result, minus income taxes paid or accrued, plus depreciation, amortization and impairment losses, minus impairment loss reversals, plus/minus changes in pension provisions, minus gains/plus losses on retirements of noncurrent assets, minus gains from the remeasurement of already held assets in step acquisitions. The change in pension provisions includes the elimination of non-cash components of EBIT. It also contains benefit payments during the year. For details see Combined Management Report, Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

[8] Net cash flow = cash flow from operating activities according to IAS 7

New products create optimism for the future

Dear stockholders and friends of the company:

We can all look back on a very successful year for Bayer.

That assessment is based on two key factors. First, we made good strategic progress in 2012, as we continued to pursue our fascinating mission "Bayer: Science For A Better Life." In line with this mission, we develop and commercialize innovative products that people really need. These include medicines to help sick people, improved seeds to help farmers grow better crops, and high-tech materials to enable the development of lighter, more energy-efficient vehicles – in other words, products that are truly capable of raising the quality of life for many people. I'm proud of that – and I know our employees are too.

Second, we were operationally very successful, with continued growth momentum in all of our subgroups. This was driven mainly by the expansion of our life-science businesses – which are our health care business Bayer HealthCare and our agriculture business Bayer CropScience.

This success was a real achievement, particularly given the debt crisis in Europe and the associated economic weakness in a number of countries.

Under these circumstances, we continue to benefit from the fact that we generate some 70 percent of sales and around 85 percent of earnings before special items in our life-science businesses, as these are comparatively unaffected by economic fluctuations. Additionally, 60 percent of our business is outside of Europe. The rapid growth of our business in the BRIC countries – Brazil, Russia, India and China – continued, with sales rising well over 10 percent in some cases. That means our investments there, especially for marketing our products and building our workforce, are paying off.

Against this backdrop, we have good results to report for 2012. Adjusted for currency and portfolio effects, Bayer Group sales increased by more than 5 percent to €39.8 billion – the highest level in our 150-year history. However, EBIT – or earnings before financial result and taxes – did not quite match the prior year, coming in at just under €4 billion. This was largely due to the considerable sum of €1.7 billion in special charges, which were mainly related to legal disputes.

By contrast, EBITDA – earnings before financial result, taxes, depreciation and amortization – before special items advanced by nearly 9 percent to €8.3 billion, thanks partly to positive currency effects.

Net income held steady at €2.4 billion, despite special items and substantial investments in both innovation and in business expansion in emerging markets. Core earnings per share rose by nearly 11 percent.

We are especially pleased that all three subgroups contributed to this good performance, with growth in sales and in earnings before special items. For Bayer HealthCare, the situation in Europe remained difficult, particularly in view of the health system reforms in a number of countries. Heavy generic competition also presents an ongoing challenge. But sales from our Pharmaceuticals segment rose nonetheless, thanks to new products and continuing growth momentum in emerging markets. However, earnings were held back by significant special charges, mainly comprised of accounting measures for legal claims in connection with Yasmin™/YAZ™. The Consumer



Dr. Marijn Dekkers, Chairman of the Board of Management of Bayer AG

Health segment also made gratifying progress, with above-market growth and improved margins.

Sales of Bayer CropScience advanced substantially, helped by positive market conditions. This was largely due to good business with new products in Crop Protection and sharply higher sales in the Seeds unit. Our

refocused sales and marketing activities as well as our streamlined product range were key to our success. As a result, earnings in CropScience rose significantly.

MaterialScience, our high-tech materials business, also posted continued growth in sales, mainly due to higher volumes. In contrast to 2011, we were also able to raise EBITDA before special items despite high raw material and energy costs.

The pleasing performance by our three subgroups this year was supported by the commitment and expertise of our service companies and our colleagues in the administrative functions.

Apart from our positive financial performance we also made major progress toward achieving our other corporate goals. Most importantly, the outstanding development of our product pipeline in the life sciences continued to strengthen our competitive position.

While other pharmaceutical companies have patent expirations to worry about, we are much less affected by this. In Pharmaceuticals, our five most important late-stage product candidates alone have a combined peak sales potential of €5.5 billion. In 2012 we made particularly good headway with market introductions for our innovative anticoagulant Xarelto™, which was approved in further indications in major countries. Our pharmaceuticals business is also strengthened by the launches of Stivarga™ to treat advanced colorectal cancer and the eye medicine Eylea™ to treat wet age-related macular degeneration. More product introductions lie ahead. For example, we have filed for marketing authorization for radium-223 dichloride (Alpharadin) to treat bone metastases in prostate cancer and for riociguat in two different forms of pulmonary hypertension.

We also see outstanding prospects at CropScience for our innovative product range and our positioning in the markets. We estimate the peak sales potential of new products with probable launch dates between 2011 and 2016 at more than €4 billion. Our new fungicide Xpro™, which is already on the market, boosts cereal yields by an average of 5 percent. And a new cot-

ton seed from the FiberMax™ family scheduled for launch in 2014 offers both herbicide tolerance and insect resistance, thus greatly helping to improve the harvest – to cite just two examples.

We made good progress in 2012 with our strategy of making small or medium-sized acquisitions to systematically strengthen our life-science business. Such acquisitions improve our regional positioning, round out our product portfolio and/or give us access to major new technologies. For example, we strengthened our expertise in biological crop protection with the purchase of U.S. company AgraQuest and expanded our product portfolio by acquiring the U.S. animal health business of Teva.

I am especially pleased that we continued to strengthen our position as an innovation company. When we speak with the media and other stakeholders, we repeatedly point out the importance of innovation and of an innovation-friendly environment – both for us and for society as a whole. After all, our business model and our contribution to society are based on our innovation capability, which in turn gives us our competitive advantage. It is therefore of fundamental importance to us and our customers that society accepts and appreciates our innovations.

We also made advances in the area of human resources. We have now firmly integrated our corporate values – represented by the word LIFE – into our global performance management system. One of the assessment criteria for all managerial employees is the extent to which they apply the LIFE values in the pursuit of their career goals. Various training programs are in place to help us obtain more open employee feedback and enhance diversity and inclusion within the enterprise. Our overriding goal is to continue building on our innovation culture and capabilities – beyond just research and development.

In addition, the efficiency program dubbed "More innovation, less administration," which we announced in 2010 to free up substantial resources for innovation and growth, was successfully completed by the end of 2012. A key factor in the program's success was that it was based on a constant, constructive dialogue with our employee representatives.

Now let us look to the future. With our product portfolio, our expertise and our research capabilities, we are in an excellent position to continue to pursue our mission "Bayer: Science For A Better Life" and build on our leading market positions. We plan to increase our spend on research and development to a total of €3.2 billion in 2013.

Also, Bayer is the only global company to combine expertise in human, animal and plant health within a single organization. A focus of our work in the future will be to push the boundaries between the individual life-science disciplines to the mutual benefit of each of these areas.

So, what does the year 2013 hold for our three subgroups?

Bayer HealthCare will continue to contend with generic competition and cost-saving measures imposed by many countries' health systems. However, we are pursuing a number of promising product launches, even after Xarelto™. These, of course, will again be expensive to commercialize. But it will be money well spent, because we intend their future sales to more than compensate for declines in some of our established products.

At CropScience, too, we must systematically implement our innovation-based strategy. At the core of that strategy is the introduction of new, innovative crop protection products and the steady improvement of our position in the seeds business.

Of crucial importance at MaterialScience is that we continuously increase our profitability. The key to this lies in our superior production and process technologies and, of course, in raising capacity utilization at our facilities. That, in turn, depends on the development of capacities across the industry and on cyclical demand from the main customer sectors.

This year is a very special one in Bayer's history. It marks the 150th anniversary of our founding. And it goes without saying that we will fittingly celebrate this occasion with a range of activities all over the world. Our anniversary offers a unique opportunity to enhance awareness of our brand and reinforce our positioning as an innovation company. We will seize this opportunity.

This anniversary allows us to also shine a light on our employees. We already have numerous events planned for them. After all, without our employees and their dedication, motivation and ingenuity, Bayer would not be the great company that it is today. On behalf of the management teams of the entire Bayer Group, I would like to thank them for their excellent work and their commitment to Bayer.

We had a successful year in 2012. We have identified our future growth opportunities and the challenges we face, and we have designed our strategy for Bayer to continue moving forward. We greatly appreciate your ongoing support.

Sincerely,



Dr. Marijn Dekkers
Chairman of the Board of Management of Bayer AG

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150 YEARS OF BAYER

Inventions for health care



1899

The success story of a once-in-a-century medicine begins: developed by Felix Hoffmann, the pain reliever Aspirin™ is registered as a trademark.



1935

Start of a new chapter in medical history: Bayer researcher Gerhard Domagk discovers the antibacterial effect of the sulfonamides, resulting in Prontosil™ becoming the first antibiotic for the treatment of previously fatal infections. Domagk's discovery earns him the Nobel Prize in Medicine in 1939. Further milestones in antibiotics research at Bayer are the market launches of Ciprobay™ (1987) and Avalox™ (1999). Also launched in 1987 is Baytril™ for livestock and companion animals.



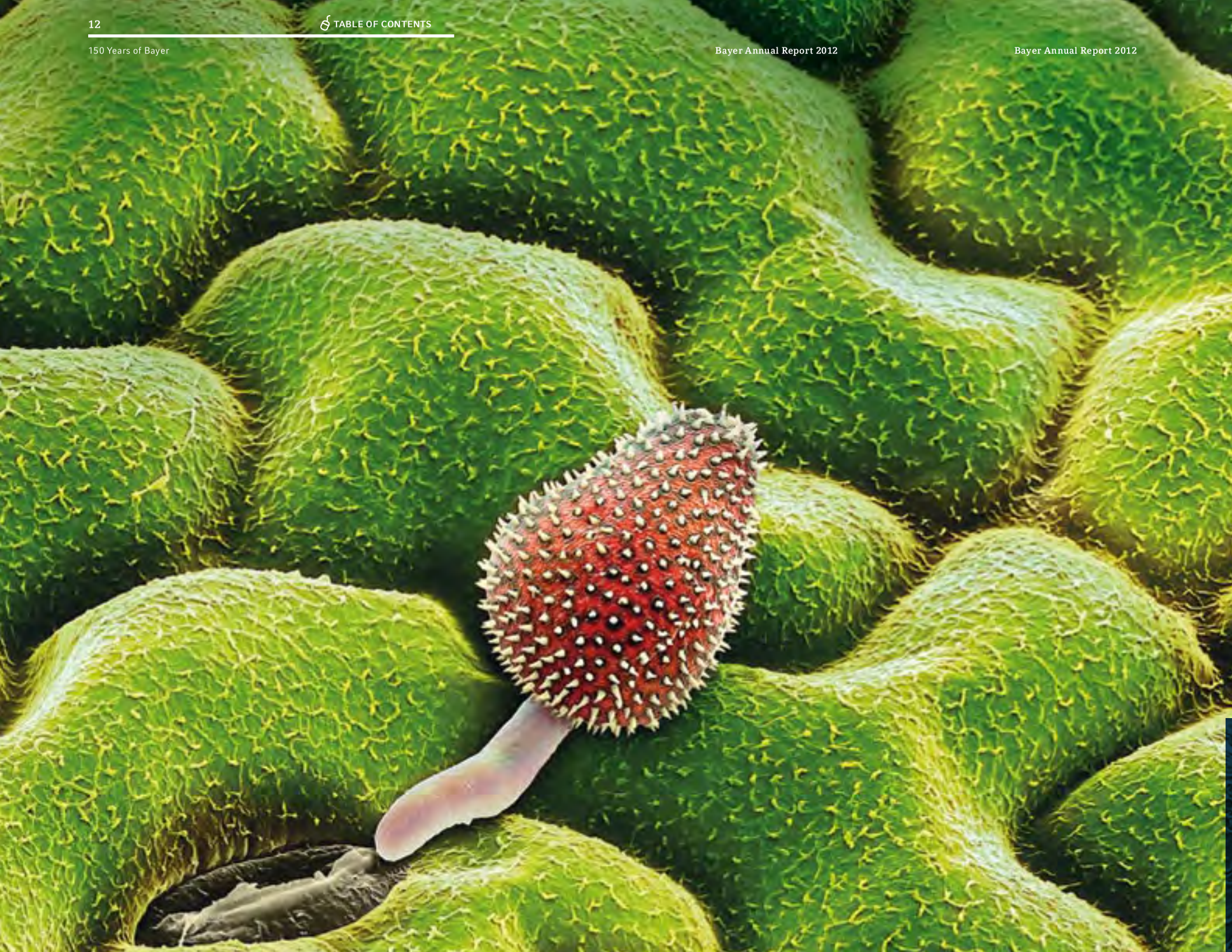


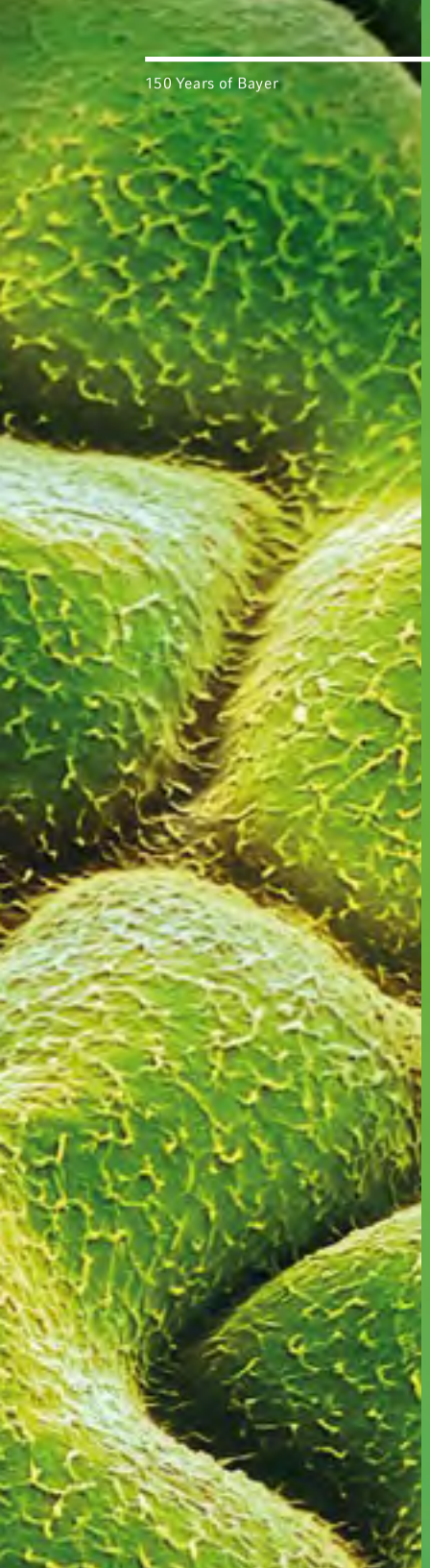


1975

Important contribution t
Adalat™ is launched for t
blood pressure. In 1980
German pharmaceutical
French award "Prix Galie

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150 YEARS OF BAYER

Inventions for agriculture



1892

"Farbenfabriken vorm. Friedr. Bayer & Co." introduces the world's first synthetic chemical insecticide – Antinonnin to control caterpillars – marking the birth of modern crop protection.



1914

Uspulun is launched – the first product to effectively protect cereal seed against fungal infestation. It quickly achieves success, and its use is made mandatory in some parts of Germany.



1971

The selective herbicide Sencor™ kills weeds without damaging crops such as potatoes, tomatoes, sugarcane or soybeans.





2008

Bayer researchers develop Movento™, an insecticide with a completely new mechanism of action. Its active ingredient is spread evenly throughout the plant in two different ways.



2004

Bayer's achie
chemistry cul
of fungicides
Prosaro™ and
are based on
the triazolinth
by Bayer scie

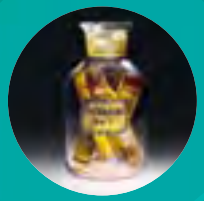






150 YEARS OF BAYER

Inventions for high-tech materials



1910

Bayer chemist Fritz Hofmann succeeds in polymerizing the basic building block of natural rubber in 1909, leading a year later to the production of the first methyl rubber for automotive tires. In 1929 chemists Eduard Tschunkur and Walter Bock in Leverkusen lay the foundations for the commercial breakthrough of synthetic rubber.



1937

Otto Bayer invents polyurethanes, an entirely new class of materials that today are used as insulating materials in sustainable construction, for lighter and eco-friendly cars, and in sports and recreational goods.



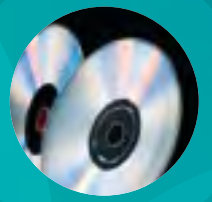
1954

Bayer introduces Dralon™, a versatile



2008

Bayer wins the Environment Award of
ation of German Industry (BDI) for its c
depolarized cathode technology. Inte
chlorine production, the process makes
use of oxygen in the electrolysis of hy
acid to reduce electricity consumption
power-plant CO_2 emissions – by 30 per





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Innovation through partnership

Time and again over the past 150 years, Bayer inventions have helped improve people's quality of life. And that remains our task for the future. Our own commitment to research and development is complemented by a global network of more than 800 partners – for leading-edge collaborations have become an integral part of Bayer's innovation culture. Here each partner contributes its own strengths and in turn benefits from the other's knowledge of areas in which it has few, if any, activities itself. That makes carefully planned collaborations a win-win for everyone involved.

Health

Many diseases today remain dif
At the same time, there is growi
to treat age-related diseases. So
contribution to make. Our partn
idea through all stages of resea
sequent co-marketing.

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Bayer HealthCare // From Wuppertal to San Francisco and from Berlin to Beijing, Bayer's researchers are looking for new active substances to treat diseases with a high unmet medical need. The company's scientists are networked with leading universities, public research institutions and partner companies worldwide to jointly turn new ideas into tomorrow's innovative products.

A glorious late summer day in California, the San Francisco research community is celebrating the inauguration of the Bayer start-up center CoLaborator™. Keynote speakers include San Francisco mayor Ed Lee, who makes no secret of his enthusiasm for the project: "The CoLaborator™ will support startups that are seeking to develop groundbreaking medical treatments for patients," he says. For Bayer, the center represents a source of innovations. Explained Professor Andreas Busch, Head of Global Drug Discovery at Bayer HealthCare, at the inauguration ceremony: "We aim to collaborate at an ever earlier stage with creative scientists who are developing new ideas and concepts. What we are looking for is the inventor spirit and the entrepreneurship needed to develop new technologies and novel therapeutic approaches."

Medical innovations are of major importance for a steadily aging world population. In the emerging markets, the demand for health care is rising in line with living standards. At the same time, the pressure on health care costs is growing in many countries, and the demands placed on reimbursable medicines are increasing. Patients are approaching health issues with greater self-confidence and are more closely involved in the related decisions. For these reasons, collaborations are a core feature of Bayer's research strategy.

"In many cases, individual companies can no longer overcome the challenges of the health care industry on their own. Collaborations have become an imperative rather than an option," explains Professor Wolfgang Plischke, CEO of Bayer HealthCare, adding that new types of collaboration are essential. "We need a paradigm change in the way we work with our partners." He says this applies all the way from basic research to marketing – and that these collaborations need to be designed for the long term.

The CoLaborator™ is just one of a range of tools for implementing new ideas. Another is the online platform "Grants4Targets," where young scientists can submit ideas for new drug targets. In future they will also be able to submit new ideas for new active ingredients on the "Grants-4Leads" platform. Bayer provides financial resources, equipment and expertise for evaluating promising ideas. Since the platform was launched in 2009, scientists have submitted 825 proposals, of which 114 are being sponsored by Bayer.

Research collaborations in Asia include an alliance with China's renowned Tsinghua University; it focuses on in-depth analysis of disease mechanisms, decoding 3D structures of drug targets, and innovative drug discovery chemistry programs. "This strategic research partnership between Bayer and Tsinghua University in biomedicine is one of the first of its kind in China," explains Professor Yigong Shi, Dean of the School of Life Sciences. "This partnership has impacted every corner of China's biomedical research landscape."

ADVANTAGES FOR PARTNERS AND PATIENTS

In oncology research, too, a comprehensive network provides significant impetus for Bayer scientists. One major strategic partnership in the search for new medicines is the collaboration with the German Cancer Research Center (DKFZ) in Heidelberg. "Here, two strong partners from academia and industry have joined forces to identify innovative approaches to the development of new therapies. It's a little like talent scouting in sports. The aim is to identify the potential of action mechanisms early on and systematically develop them," says DKFZ Management Board chairman Professor Otmar D. Wiestler. "In just three years of collaboration we have initiated 19 projects, six of which have already reached important milestones and been transferred to the next phase of drug development at Bayer."

At the same time, Bayer draws on the ideas of external biotech companies to jointly develop drugs to fight cancer. Examples from the development pipeline include the strategic partnership Bayer formed in early 2010 with California-based OncoMed Pharmaceuticals to develop a completely new class of therapeutic agents against so-called cancer stem cells. Promising preclinical data have already been published. And since 2009, Bayer has been working with AmGen Research Munich (formerly Micromet) to research and develop a BiTE antibody to treat patients with prostate cancer. The first clinical Phase I study began in early 2012. Bayer has since extended this collaboration to include the research, development and commercialization of an additional BiTE antibody. The structure of these antibodies enables them to bring "cytotoxic" T cells produced by the body into the direct vicinity of tumor cells and destroy them with the help of the patient's own immune system.



Clinical study at the Jan Palfijn hospital in Antwerp, Belgium: Dr. Troy Sarich of Bayer's cooperation partner, Janssen Research & Development, LLC, a subsidiary of Johnson & Johnson, and Dr. Bernhard Glombitza (right) from Bayer HealthCare discuss the anticoagulant rivaroxaban.

Professor Wolfgang Plischke, Chief Executive Officer* of Bayer HealthCare, on the subgroup's strategy

// Creating value together



Advances in science now allow us to understand many processes in living cells in more detail and sometimes even on the molecular level. Information technology also is developing at breathtaking speed. The world has become faster and more complex. And that applies to the health sector, too. We can only seize the resulting opportunities and address the challenges by collaborating with a variety of specialized partners from different areas of society.

At Bayer HealthCare, such collaboration takes place at all stages in the value chain. We currently have one of the most promising pipelines in our industry. In many cases this success is partly based on innovative partnerships. The same applies to our business with non-prescription products, where we aim to become the world leader in the coming years, or the continued expansion of our strong position in the emerging markets. Here too, partnerships play a key role. At the same time we intend to increasingly offer health care solutions as single products in the future to bring about improvements in the areas of cardiovascular and gynecological health care. There we will gradually tread new paths and increasingly cooperate with partners – also outside the traditional health sector.

* Dr. Jörg Reinhardt ends his active service with Bayer on February 28, 2013. Professor Wolfgang Plischke will take over the function of Chairman at Bayer HealthCare in addition to his existing duties until a successor is appointed.

»In just three years of collaboration we have initiated 19 projects, six of which have already reached important milestones and been transferred to the next phase of drug development at Bayer.«

Professor Otmar D. Wiestler, Chairman of the Management Board of the German Cancer Research Center, Heidelberg

Also in 2009, a license agreement was signed with Norwegian biotech company Algeta, marking the start of a successful cooperation. Positive Phase III results have since been obtained for the use of radium-223 dichloride (Alpharadin) to treat hormone-refractory prostate cancer and bone metastases. For many years, Bayer has also maintained a research and development partnership with Onyx Pharmaceuticals. The two companies jointly developed the substance sorafenib (Nexavar™), which has been launched in more than 100 countries for the treatment of liver and kidney cancer.

Says Nigel Sheail, Head of Global Business Development and Licensing at Bayer HealthCare: "In the past, large companies could do everything by themselves. Today that's no longer possible. Together with our partners, we develop outstanding ideas into marketable products. That makes for a triple-win situation, with both partners – and, above all, patients – benefiting from the collaborations." In cooperation with U.S.-based Regeneron, for example, Bayer developed the medicine Eylea™ (aflibercept) for the treatment of wet age-related macular degeneration. The product has already received approval in Europe, the United States and Japan.

WORKING IN TANDEM

A successful example from the field of cardiology is our collaboration with Janssen Research and Development, LLC, a Johnson & Johnson company, on the oral anticoagulant Xarelto™ (rivaroxaban). This substance, which has "blockbuster" potential, was discovered at the Wuppertal Research Center in 1999. In 2005, following a comprehensive selection process with a number of leading pharmaceutical companies, Bayer entered into a collaboration with Janssen to increase the product's global potential by expanding its range of indicated uses. The development program for Xarelto™ will enroll nearly 100,000 patients by the time it is completed. Rivaroxaban is currently the most studied oral, direct Factor Xa inhibitor in the world.

The design of the collaboration is just as unique as the drug itself, explains project director Dr. Bernhard Glombitza: "We work in tandem, and each Bayer scientist has a specific counterpart within the Janssen organization. At times our two teams have consisted of some 100 employees working very closely together. That has enabled us to complete complex programs in a very short period of time and with minimum administrative outlay. As a result, Xarelto™ today has the largest number of approved indications of any of the novel oral anticoagulants."



100,000

patients will be enrolled in the clinical study program for rivaroxaban.

Glombitza's colleague at Janssen, Dr. Troy Sarich, shares his enthusiasm for the collaboration with Bayer – as well as his passion for the substance: "There are few opportunities like this in a career to work on such an important new medicine. This has been a wonderful experience. Our teams share the desire to advance the practice of medicine and help patients."

MARKETING PARTNERS

Bayer is also working with partners in marketing and distribution. In the field of animal health, for example, the company is collaborating with Argentinian vaccine producer Rosenbusch to supplement its own portfolio and enhance the product offering for farmers. Another alliance is geared to helping diabetes patients manage their condition on a daily basis. Thanks to wireless communication between Bayer's Contour™ blood glucose meter and an insulin pump from partner company Medtronic, for example, people with diabetes can control their blood glucose levels more easily and more accurately.

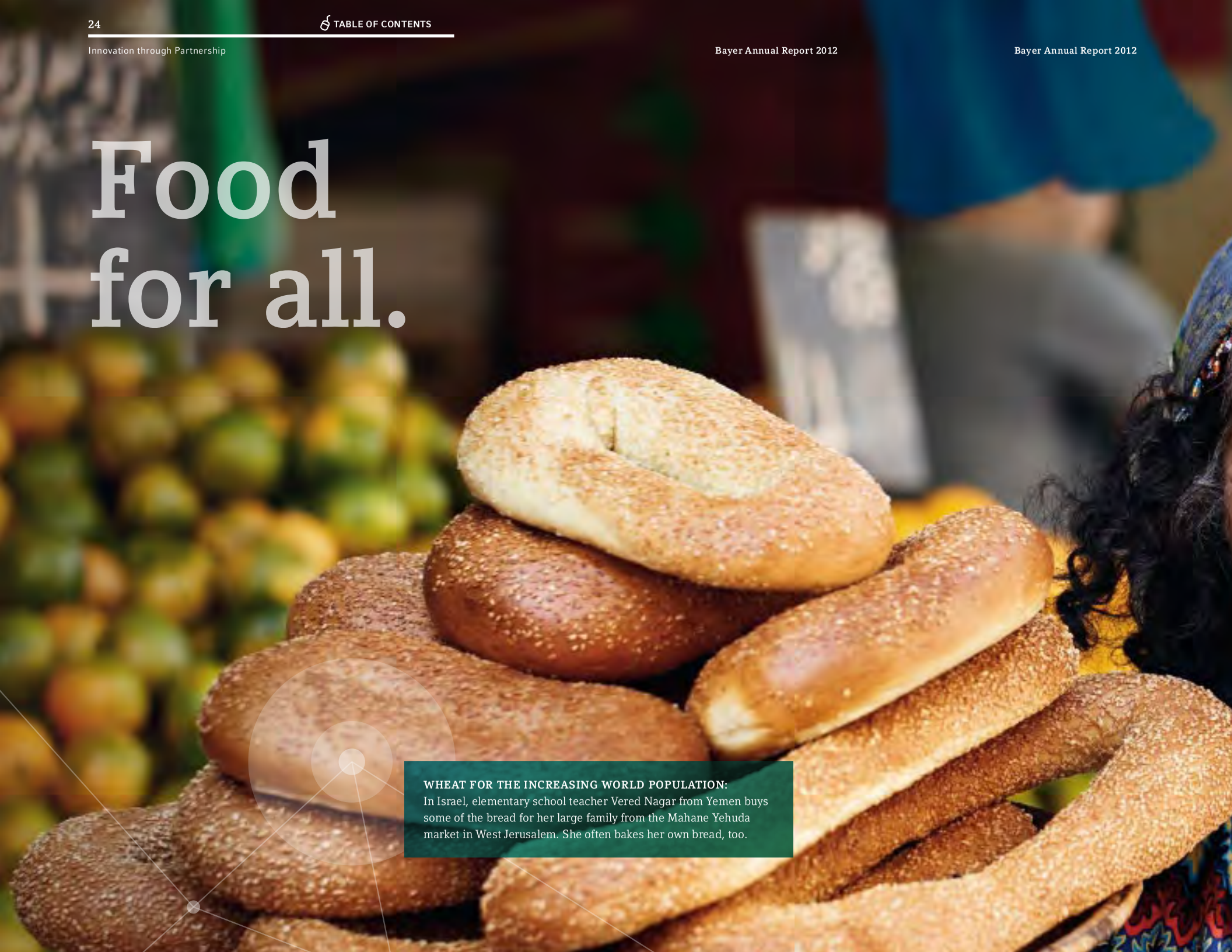
With this broad spectrum of alliances, Bayer is also helping to make health systems more efficient, explains Bayer HealthCare CEO Plischke: "When different perspectives and competencies come together, you often end up with something new that is more valuable than the sum of the parts. These innovative partnerships are key to developing sustainable answers to the growing challenges of tomorrow."



In the laboratory of OncoMed Pharmaceuticals in Redwood City, California, Angie Park of OncoMed and Dr. Peter Nell from Bayer HealthCare discuss a test apparatus. Bayer entered into a strategic alliance with U.S. company OncoMed in 2010 to develop a new class of drugs to target cancer stem cells.

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Food for all.



WHEAT FOR THE INCREASING WORLD POPULATION:
In Israel, elementary school teacher Vered Nagar from Yemen buys some of the bread for her large family from the Mahane Yehuda market in West Jerusalem. She often bakes her own bread, too.



Healthy, high-yielding wheat despite heat and drought: that's the goal of Bayer's research collaboration with Israeli company Evogene. Our picture shows An Michiels from Bayer CropScience and Evogene CEO Ofer Haviv in a greenhouse in Rehovot, Israel.

Liam Condon, Chief Executive Officer of Bayer CropScience, on the subgroup's strategy

// Partnerships to feed the growing world population



Today's world faces considerable challenges: more and more people have to be fed – with a limited amount of arable land and under difficult climatic conditions. We need to put farmers in a position to cope with extreme weather conditions, plant diseases and pests. Yet the challenges are simply too big and wide-ranging for us to solve on our own. So we forge partnerships around the globe to bring resources, ideas and people together. We collaborate with the best scientists at universities, research institutes and other companies to accelerate the development of innovative technologies.

Our comprehensive approach comprises collaborations along the entire value chain, from the seed to the consumer. They include regional and local projects to help millions of farmers improve the production of staple foods. Among these projects are 240 food chain partnerships in 30 countries for major fruit and vegetable crops. We are working with our partners at the interfaces between biology and chemistry – and between science and farming – to develop tomorrow's solutions.

Bayer CropScience // Seed, chemical and biological crop protection products, and services: Bayer CropScience already offers comprehensive solutions for farmers. Targeted partnerships are opening up new ways to sustainably feed the growing world population.

Wheat and rice growers produce two of the world's most important food staples. And with the global population predicted to rise to nine billion by 2050, the world has high expectations of them. Agricultural output worldwide will need to increase by 70 percent if everyone is to have enough to eat. "Neither farmers, nor governments, nor the manufacturers of agricultural inputs can achieve this on their own," says Bayer CropScience CEO Liam Condon: "That's why we've set up collaborations all over the world to drive research into wheat and rice. But more than anything, we see ourselves as a long-term partner to farmers – because raising agricultural productivity ultimately depends on the many millions of farmers across the globe."

GLOBAL NETWORK FOR WHEAT

A trial field in southern Israel: 35 degrees Celsius and no shade. This is where Bayer's partner Evogene has set up a kind of survival camp for wheat. Evogene is testing the ability of some 200 wheat varieties from all over the world to thrive in the blazing sun. The crucial factor is their ability to produce high yields despite heat and drought. This aspect plays an increasing role in efforts to produce food for a growing world population in the face of the adverse climatic conditions that prevail in some areas and the limited amount of arable land. "We have the technology to identify from millions of genes those that our partners can use to breed new crop varieties," says Evogene CEO Ofer Haviv. "And the main characteristics that interest them are yield improvement, drought and heat tolerance, and fertilizer efficiency."

But partners like Evogene, the Australian government's Commonwealth Scientific and Industrial Research Organisation (CSIRO) or the British research institute ADAS represent only the first step. The second major success factor for plant breeders is the regional adaptation of crop varieties: after all, U.S. wheat doesn't have to thrive in Poland, and Canadian wheat doesn't need to be grown in France. Bayer CropScience is gaining access to local breeding material through partners in France, Romania, Ukraine, the United States and other countries. One of the company's U.S. partners is the University of Nebraska, whose internationally renowned wheat breeder, Professor Stephen Baenziger, is also enthusiastic about the collaboration's potential: "Bayer CropScience is bringing new technologies to wheat breeding as only a global company can. For our part, we have decades of local experience and knowledge about what works in the wheat fields of Nebraska. This combination offers the best prospects for Bayer to attain its ambitious breeding targets."

Within the globe-spanning wheat network, each partner appreciates the other's efforts. "Partnerships are our lifeblood," says Dr. Marcus Weidler, responsible for wheat seeds and traits at Bayer CropScience. "Bayer couldn't succeed in the wheat business without partnerships. We began breeding new wheat varieties in 2010 and expect to introduce the first products starting in 2015."

COLLABORATIONS AND PROGRAMS FOR RICE

While drought stress is a major issue with wheat, a further focus of research is on ensuring the survival of rice plants after flooding. A key Bayer partner here is the International Rice Research Institute (IRRI), located south of the Philippine capital Manila. Recently a new project was launched with the IRRI to improve the heat tolerance of rice, linked to ongoing research by other Bayer CropScience partners – the Max Planck Institute in Germany and the French agricultural research organization CIRAD. "The collaboration goes well beyond the development of improved seed, however," explains Philippe Hervé, a rice expert at Bayer CropScience. Two joint projects were successfully completed only recently: the setting-up of a new database containing the genetic information for more than 2,000 rice varieties, and the development of a diagnostic set to identify bacterial blight in rice seed.

The IRRI has also established a global network that supports development work in rice-growing countries such as Vietnam, India and Indonesia, where Bayer CropScience also works with small farmers to implement customized programs.

Aep Sodikin is one of 40 million small farmers in Indonesia who play a key role in food production. If they are to sus-



Bayer CropScience has entered into a cooperation with the International Rice Research Institute (IRRI), based in the Philippines, that extends far beyond the development of improved seed. IRRI Director General Dr. Robert Zeigler (l.), IRRI researcher Dr. Casiana Vera Cruz and Dr. Philippe Hervé from Bayer CropScience examine the growth of rice plants in a trials field south of Manila.

»Bayer CropScience is bringing new technologies to wheat breeding as only a global company can. For our part, we have decades of local experience and knowledge about what works in the wheat fields of Nebraska.«

Professor Stephen Baenziger, University of Nebraska

tainably increase their yields, these farmers must be helped to make effective use of modern technologies such as innovative seed and crop protection products. That is the only way to overcome 21st-century challenges such as drought, rural depopulation, fertilizer shortages or the need to observe sustainability principles in agriculture. Farmers like Sodikin are willing to apply such innovations. Bayer CropScience has therefore developed programs in all major rice-growing countries to help farmers increase production. "At the same time, these initiatives are designed to improve farm incomes," says Mahesh Girdhar, Global Crop Lead Rice at Bayer CropScience. "The aim is to enable growers to take the step from subsistence farming to agricultural entrepreneurship." In Indonesia, Sodikin has boosted crop yields by up to 30 percent thanks to the Bayer project.

70%

Global agricultural production needs to rise by 70 percent to feed the growing world population.

In the rice-exporting country of Vietnam and also in Thailand, Bayer's "Much More Rice" program – a package comprising seed treatment, crop protection and training – not only has lived up to its name, but has also improved the quality of the harvest. Rice production has been sustainably increased in India, too, as Chaitanya Dhareshwar, Rice Manager in Mumbai, explains. "We advise farmers on which seed is best suited to their local needs, and then show them how they can achieve 10 to 12 percent higher yields using the right crop protection products. They can then sell their surplus produce in the market."

Bayer also intends to collaborate with renowned Japanese planting equipment manufacturers to address problems resulting from rural depopulation in India and China. By mechanizing planting and treating seedlings with crop protection products, the experts aim to safeguard rice supplies even in the face of labor shortages in rural areas. Aki Oshima, Head of Development and Regulatory Affairs at Bayer CropScience China, emphasizes the urgency: "These technologies are of the utmost importance for safeguarding long-term food supplies in China."

With the aim of improving food quality, Bayer CropScience has also joined the HarvestPlus program, sponsors of which include the World Bank and the Bill & Melinda Gates Foundation. The program aims to fortify food staples with vital trace elements such as zinc. A deficiency of this element is one of the main causes of development and growth disorders among children in developing countries. In the search for a practicable solution combining crop protection and zinc, the program is working together with Bayer CropScience in the Harvest Zinc project, in which the fungicide Antracol™ is being tested. "Initial test results show that our product – apart from its fungicidal effect – increases the zinc content of rice by up to 18 percent," says Lino Dias, Global Product Manager at Bayer CropScience. About half of all arable land worldwide does not contain enough zinc to provide people with the amount the body needs. Antracol™ can help to solve this problem.

Yet one of the biggest challenges for both wheat and rice continues to be the climate: in the summer of 2012, for example, droughts destroyed much of the cereal harvest in India, Russia and the United States, strongly impacting the local farming communities. Stakeholders further up the value chain, such as food companies are also affected by natural disasters of this kind. They need crop varieties that produce reliable and high-quality yields even under difficult climate conditions. Bayer CropScience and its cooperation partners are working flat out to come up with those solutions.

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Keeping out the cold.



Bayer MaterialScience // Energy efficiency is a key topic of this century, and the millions of residential buildings around the world provide a starting point. Innovative insulation can help more than anything else to reduce buildings' energy requirements and greenhouse gas emissions. Bayer MaterialScience is working with its partners to develop more and more new products and solutions to protect against heat and cold – in the construction and other sectors.

A pale yellow square – small as a notepad, light as a feather. Dr. Bernd Rothe holds the foam sample up to the rear of the cockpit. "Here's one of the places where our material is used," the engineer from Bayer MaterialScience explains. Standing next to him in the hangar in Payerne, Switzerland, is a man in a black flight jacket, who nods in agreement. Bertrand Piccard has great expectations for the innovative polyurethane rigid foam. The material is intended to help him achieve his dream of circumnavigating the Earth in an aircraft that flies without any fuel, powered exclusively by solar energy. This pioneering feat is planned for 2015, and work on the crucial second model is underway. Numerous innovative products from Bayer MaterialScience will be on board again this time. The main goal is to make Piccard's "aircraft of the future" – the Solar Impulse, which has the wingspan of a large commercial airliner – as light as possible.

But a number of other challenges exist as well. The cockpit, for example, must be especially well insulated because the aircraft is exposed to extreme temperature fluctuations. The thermometer can drop to minus 50 degrees at night and reach plus 50 degrees during the day. This is where the material that Mr. Rothe just pointed out on the prototype aircraft comes into play: Baytherm™ Microcell, an extremely high-performance insulating material developed by Bayer MaterialScience. The company has been an official partner to Piccard since 2010, his project's main objective being to demonstrate that clean technologies can significantly reduce energy consumption. "To make our vision a reality, we are relying on the expertise and innovative capability of Bayer MaterialScience," says the Swiss aviation pioneer.

However, the company's diverse products and solutions do not just pave the way for new mobility concepts. Efficient insulation is critical to the cold chain, for example, which needs to become increasingly efficient in view of the expanding world population and growing urbanization. On top of that, the millions of buildings – which account for some 40 percent



In the hangar in Payerne, Switzerland, Dr. Bernd Rothe from Bayer MaterialScience (center) discusses technical details of the solar aircraft's cabin with aviation pioneers Bertrand Piccard (left) and André Borschberg.

Patrick Thomas, Chief Executive Officer of Bayer MaterialScience, on the strategy of the subgroup

// Innovations for global challenges



Through an array of innovative products and manufacturing processes, Bayer MaterialScience is helping to combat some of the major challenges of our time: depletion of fossil resources, growing urbanization and the increasing demand on transport. We develop creative solutions that are also efficient, functional and attractive to various industries; notably construction, automotive and electronics.

To achieve our aim of "Bayer: Science for a Better Life," we target the most important needs of society and the markets we serve. We seek to sustain our leading positions in our key markets while continuing to grow our business in the developing economies, particularly in Asia. Being close to our markets, we can quickly provide solutions to meet the growing demands of society.

As a global leader, we continue to focus on our excellent safety performance, as well as on operational excellence, cost leadership and the best possible allocation of our total resources. This together with an equal and positive work environment provides a solid foundation for our continued success.



High-tech polyurethane from Bayer protects the refrigerated containers of shipping company Maersk, in which below-freezing temperatures may need to be maintained. In Bremerhaven, Germany, Hans Schröder checks the functionality of a container.

»Together with the experts from Bayer MaterialScience, we are working nonstop to further improve the insulation properties and the structural strength of the containers.«

Gert Jorgensen, Chief Technical Officer, Maersk Container Industry

20%



Refrigeration accounts for an average 20 percent of electricity consumption in the home. Innovative insulating materials can crucially improve the efficiency of refrigerated appliances.

of global energy consumption – also need to have the best possible insulation against heat and cold. Experts believe a great deal of energy can be saved by sustainably designing new buildings and renovating old ones.

"Polyurethane rigid foam is considered to be the best industrially available insulating material, and our company develops and manufactures its components," says Dr. Joachim Wolff, Head of the Polyurethanes business unit at Bayer MaterialScience. "The products and solutions based on this versatile material greatly help to raise energy and resource efficiency – one of the core challenges facing society this century." Polyurethanes, which Bayer MaterialScience is steadily improving, are used to insulate many residential and commercial buildings and virtually all refrigerated appliances. Baytherm™ Microcell is the latest advancement. This new material has a particularly fine structure, with pores hardly thicker than a human hair. "We succeeded in decreasing the pore size by up to 40 percent compared to conventional rigid foam," explains Dr. Reinhard Albers, Head of Application Technology for Technical Insulation at Bayer MaterialScience in Leverkusen. "The result is a reduction of up to 10 percent in thermal conductivity."

The researchers already are working to make the pores even smaller. By doing so they may be able to double the material's insulating capacity and cut energy consumption in half. "We want to advance from the micro to the nano dimension, which means magnitudes of a millionth of a millimeter," says Albers. "The stage we are at right now is a milestone along the path that our researchers are pursuing with the help of partners such as the Institute of Physical Chemistry at the University of Cologne."

Baytherm™ Microcell is being tested in conjunction with leading household appliance manufacturers for use in refrigerators, which consume a great deal of energy. In a modern household, for instance, refrigerators and freezers are responsible for roughly one-fifth of total energy use. Over the past few decades, their energy efficiency has been considerably improved by using polyurethane rigid foam, and energy consumption dropped by 65 percent between 1950 and 2005. The new micro-foam is now poised to promote additional, significant savings. However, the material is suitable for more than just the household. Bayer MaterialScience also is examining its use further up the cold chain in refrigerated trucks. Particularly in emerging countries, food often goes bad, and this underscores how important it is to keep food products fresh longer on their way from the manufacturer to the consumer.

Polyurethane rigid foam with conventional pore sizes already helps to do just that. The material is found in virtually all refrigerated containers, hundreds of thousands of which are shipped all over the world. "Together with the experts from Bayer MaterialScience, we are working nonstop to further improve the insulation properties and the structural strength of the containers," says Gert Jorgensen, Chief Technical Officer at Maersk Container Industry.

ALLIANCE FOR SUSTAINABLE CONSTRUCTION

Many countries are pinning their hopes for saving energy and protecting the climate on sustainable construction, which in turn depends on keeping out heat and cold. Buildings generate considerable greenhouse gas emissions, with some 30 percent of global emissions attributable to heating, cooling, lighting and ventilation.

One of the main options for saving energy and releasing less carbon dioxide is insulation – on the facade or inside walls, in the basement, on the roof. However, there are also other paths to sustainable construction, such as using renewable energies,



While viewing a projection screen in the showroom at InnovationCity in Bottrop, Germany, Thomas Adenauer (right) from Bayer MaterialScience and investor Oliver Helmke discuss the blueprint for an office building that is being renovated to enhance its energy efficiency as part of the EcoCommercial Building Program.

ensuring the efficiency of building services and aligning the building in the right direction. "There are plenty of good ways to make a house energy-efficient and eco-friendly," says Dr. Thomas Römer, Head of the Construction & Building Industry Platform at Bayer MaterialScience. "But the optimum effect can only be achieved by combining them." According to Römer, know-how must be pooled, experts brought together and complete customized packages offered. The EcoCommercial Building (ECB) program, a global cooperation network led by Bayer MaterialScience, adopts this holistic approach. It puts developers, project managers and architects in touch with material manufacturers, service providers and specialists in areas such as solar and geothermal energy. "We established this platform in 2009 and now have over 80 partners on board," Römer explains. "Members range from Trane, which manufactures heating and air conditioning systems, and Philips, a leader in lighting, to CBRE, a global real estate service provider."

The ECB concept also takes into account geographic and climate conditions in construction projects. While making use of sunlight is important in the temperate climate zones, architecture that provides plenty of shade is in demand in hotter regions of the world, such as Greater Noida, near the Indian capital, New Delhi. That's where Bayer MaterialScience constructed an office building for its own use that generates more electricity in a year than it consumes, thanks to solar technology. Bayer maintains a total of five properties built on the ECB principle: in India, the United States, Belgium and Germany. And in the industrial city of Bottrop in Germany's Ruhr Valley, the concept is playing a role in the ecological renovation of an entire district as part of a wider project called InnovationCity. Here, the ECB partners are renovating a downtown office building to improve its energy efficiency, the ultimate aim being to reduce the energy consumption per unit area by almost three-fourths. "Individual projects like InnovationCity are intended to show the general public how effective today's options for renovating existing buildings can be," Römer adds. Many millions of buildings around the world should and could be modernized. "And that represents enormous potential for saving energy."

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Executive Council



Report of the Supervisory Board



During 2012 the Supervisory Board monitored the conduct of the company's business by the Board of Management on a regular basis with the aid of detailed written and oral reports received from the Board of Management, and also acted in an advisory capacity. In addition, the Chairman of the Supervisory Board and the Chairman of the Board of Management maintained a constant exchange of information. In this way the Supervisory Board was kept continuously informed about the company's intended business strategy, corporate planning (including financial, investment and human resources planning), earnings performance, the state of the business and the situation in the company and the Group as a whole.

Where Board of Management decisions or actions required the approval of the Supervisory Board, whether by law or under the Articles of Incorporation or the rules of procedure, the draft resolutions were inspected by the members at the meetings of the full Supervisory Board, sometimes after preparatory work by the committees, or approved on the basis of documents circulated to the members. The Supervisory Board was involved in decisions of material importance to the company. We discussed at length the business trends described in the reports from the Board of Management and the prospects for the development of the Bayer Group as a whole, the individual organizational units and the principal affiliated companies in Germany and abroad.

Six meetings of the full Supervisory Board took place during 2012. With the exception of Dr. Jürgen Weber, who suffered a prolonged illness, no member of the Supervisory Board attended fewer than half of the meetings held during the period of the year for which he/she was a member. The average attendance rate by Supervisory Board members at the meetings held in 2012 was nearly 95 percent.

The members of the Board of Management regularly attended the meetings of the Supervisory Board. The Supervisory Board met without the Board of Management where necessary.

Elections to the Supervisory Board

The regular elections of both employee representatives and stockholder representatives to the Supervisory Board were held in 2012. On February 7, 2012, the employees' delegate assembly re-elected Dr. Thomas Fischer, Peter Hausmann, Reiner Hoffmann, Petra Kronen, Thomas de



Werner Wenning, Chairman of the Supervisory Board of Bayer AG

Win and Oliver Zühlke to the Supervisory Board. The following employee representatives were elected to the Supervisory Board for the first time: André van Broich, Yüksel Karaaslan, Petra Reinbold-Knape and Michael Schmidt-Kiessling. André Aich, Willy Beumann, Hubertus Schmoldt and Roswitha Süsselbeck left the Supervisory Board. The changes became effective at the end of the Annual Stockholders' Meeting of Bayer AG on April 27, 2012.

The Annual Stockholders' Meeting of Bayer AG re-elected the following stockholder representatives to the Supervisory Board: Dr. Paul Achleitner, Dr. Clemens Börsig, Dr. Klaus Kleinfeld, Dr. Helmut Panke, Dr. Manfred Schneider, Prof. Ekkehard D. Schulz, Dr. Klaus Sturany and Prof. Ernst-Ludwig Winnacker. Dr. Schneider was re-elected for the period until September 30, 2012. The following stockholder representatives were elected to the Supervisory Board for the first time: Thomas Ebeling, Sue H. Rataj and – with effect from October 1, 2012 – Werner Wenning. Prof. Hans-Olaf Henkel and Dr. Jürgen Weber left the Supervisory Board.

The Supervisory Board elected Manfred Schneider as its Chairman for the period until September 30, 2012 and Werner Wenning as its Chairman effective October 1, 2012. Thomas de Win was elected Deputy Chairman.

Principal topics discussed by the Supervisory Board

The deliberations of the Supervisory Board focused on questions relating to the strategies and business activities of the Group as a whole and of the subgroups. The discussions at the respective meetings in 2012 centered on various topics. At the February meeting, the Supervisory Board discussed the 2011 Annual Report and the agenda for the 2012 Annual Stockholders' Meeting. It also dealt at length with the Bayer Group's risk management system, matters relating to the Board of Management's compensation, and the investment of existing liquidity. Finally, it approved an addition to the declaration concerning the German Corporate Governance Code.

At its meeting in April, the Supervisory Board reviewed the development of the business in the first quarter and discussed the imminent Annual Stockholders' Meeting. At its constituent meeting following the 2012 Annual Stockholders' Meeting, the Supervisory Board elected its Chairman, Vice Chairman and the members of its committees.

At the September meeting, the deliberations of the Supervisory Board centered on the situation of the Group, including recent developments relating to its strategy and competitive position and the situation in the CropScience subgroup. In addition, it discussed the compensation of the Board of Management, the results of a global employee survey and the changes to the German Corporate Governance Code.

At an extraordinary meeting in October, the Supervisory Board discussed the planned acquisition of Schiff Nutrition International, Inc., and the planned conclusion of a long-term supply agreement with Cepsa Chemical, Shanghai.

At its meeting in December, the Supervisory Board appointed Mr. Michael König to the Board of Management effective April 1, 2013 and – with effect from June 1, 2013 – as Labor Director in succession to Dr. Richard Pott. The Supervisory Board also conducted its regular review of the fixed compensation of the members of the Board of Management and the pensions paid to former members of the Board of Management and adopted a resolution on the D&O insurance for present and former members of the Board of Management. Mr. Wenning abstained from voting on the latter resolution as a precautionary measure. Also at this meeting, the Board of Management presented its planning for the business operations, the finances and the asset and liability structure of the Bayer Group in the years 2013 through 2015. In addition, the Supervisory Board again discussed the amendments to the German Corporate Governance Code, adopted a change to its own rules of procedure and resolved on the declaration concerning the German Corporate Governance Code. The outcome of the regular efficiency review of the Supervisory Board was also discussed. Following the meeting, an information and discussion forum took place about the investment and voting behavior of various types of institutional investors.

In June 2012 the Supervisory Board made decisions on the planned acquisitions of AgraQuest, Inc. and Teva Animal Health, Inc. on the basis of documents circulated to the members.

Committees of the Supervisory Board

The Supervisory Board has a Presidial Committee, an Audit Committee, a Human Resources Committee and a Nominations Committee. The current membership of the committees is shown on page 288.

Presidial Committee: This comprises the Chairman and Vice Chairman of the Supervisory Board along with a further stockholder representative and a further employee representative. The Presidial Committee serves primarily as the mediation committee pursuant to the German Codetermination Act. It has the task of submitting proposals to the Supervisory Board on the appointment of members of the Board of Management if the necessary two-thirds majority is not achieved in the first vote at a meeting of the full Supervisory Board. Certain decision-making powers in connection with capital measures, including the power to amend the Articles of Incorporation accordingly, have also been delegated to this committee. The Presidial Committee may also undertake preparatory work for full meetings of the Supervisory Board.

In January the Presidial Committee held a conference call to discuss proposals for changes to the compensation of the Supervisory Board. In 2012 the Presidial Committee was not required to convene in its capacity as the mediation committee pursuant to Section 27 Paragraph 3 of the German Codetermination Act.

Audit Committee: The Audit Committee comprises three stockholder representatives and three employee representatives. The Chairman of the Audit Committee in 2012, Dr. Klaus Sturany, satisfies the statutory requirements concerning the independence and the expertise in the field of accounting or auditing that a member of the Supervisory Board and the Audit Committee is required to possess. The Audit Committee meets regularly four times a year.

Its tasks include examining the company's financial reporting along with the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group, the combined management report, the proposal for the use of the distributable profit of Bayer AG, and the interim financial statements and management reports of the Bayer Group, all of which are prepared by the Board of Management. On the basis of the auditor's report on the audit of the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report, the Audit Committee develops proposals concerning the approval of the statements by the full Supervisory Board. The Audit Committee is also responsible for the company's relationship with the external auditor. The Audit Committee submits a proposal to the full Supervisory Board concerning the auditor's appointment, prepares the awarding of the audit contract to the audit firm appointed by the Annual Stockholders' Meeting, suggests areas of focus for the audit and determines the auditor's remuneration. It also monitors the independence, qualifications, rotation and efficiency of the auditor. In addition, the Audit Committee oversees the company's internal control system – along with the procedures used to identify, track and manage risk – and the internal audit system. It also deals with corporate compliance issues and discusses developments in this area at each of its meetings.

The Chairman of the Board of Management and the Chief Financial Officer regularly attended the meetings of the Audit Committee. The auditor was present at all the meetings, reporting in detail on the audit work and the audit reviews of the interim financial statements.

The meetings focused on a number of topics. At the February meeting, the Audit Committee discussed the risk report, which covered the risk management system, planning and market risks, legal risks, corporate compliance, the report on process and organizational risks and the internal control system, and the report by Corporate Auditing. At this meeting it also submitted a recommendation to the full Supervisory Board concerning the resolution to be put before the Annual Stockholders' Meeting on the appointment of the auditor of the financial statements.

The April meeting was mainly devoted to the yearly report of the Compliance Officer and to determining the main areas of focus for the audit of the 2012 financial statements. At its meeting in October, the Audit Committee discussed changes to the IFRS and made decisions specifying the ratio of the audit-related services to the other services to be provided by the auditor.

Human Resources Committee: On this committee, too, there is parity of representation between stockholders and employees. It consists of the Chairman of the Supervisory Board and three other members. The Human Resources Committee prepares the personnel decisions of the full Supervisory Board, which resolves on appointments or dismissals of members of the Board of Management. The Human Resources Committee resolves on behalf of the Supervisory Board on the service contracts of the members of the Board of Management. However, it is the task of the full Supervisory Board to resolve on the total compensation of the individual members of the Board of Management and the respective compensation components, as well as to regularly review the compensation system on the basis of recommendations submitted by the Human Resources Committee. The Human Resources Committee also discusses the long-term succession planning for the Board of Management.

The Human Resources Committee convened on three occasions in 2012. The matters discussed at these meetings concerned the compensation of the members of the Board of Management, their service contracts, and preparations for the appointment of Mr. Michael König as a member of the Board of Management and Labor Director.

Nominations Committee: This committee carries out preparatory work when an election of stockholder representatives to the Supervisory Board is to be held. It suggests suitable candidates for the Supervisory Board to propose to the Annual Stockholders' Meeting for election. The Nominations Committee comprises the Chairman of the Supervisory Board and the other stockholder representative on the Presidial Committee.

In accordance with its responsibilities, on a number of occasions outside its meetings the Nominations Committee discussed possible candidates for election to the Supervisory Board as stockholder representatives at the 2012 Annual Stockholders' Meeting.

The meetings and decisions of the committees, and especially the meetings of the Audit Committee, were prepared on the basis of reports and other information provided by the Board of Management. Reports on the committee meetings were presented at the meetings of the full Supervisory Board.

Corporate Governance

The Supervisory Board dealt with the ongoing development of corporate governance at Bayer, taking into account the May 15, 2012 version of the German Corporate Governance Code. In February 2012 a deviation from the German Corporate Governance Code was explained.

This became obsolete as a result of an amendment to the Corporate Governance Code contained in the May 15, 2012 version, removing the recommendation from which the company had deviated. In December the Board of Management and the Supervisory Board issued a new declaration concerning the German Corporate Governance Code. This declaration is reproduced on page 118.

Financial statements and audits

The financial statements of Bayer AG were prepared according to the requirements of the German Commercial Code and Stock Corporations Act. The consolidated financial statements of the Bayer Group were prepared according to the German Commercial Code and the International Financial Reporting Standards (IFRS). The combined management report was prepared according to the German Commercial Code. The auditor, PricewaterhouseCoopers Aktiengesellschaft, Wirtschaftsprüfungsgesellschaft, Essen, has audited the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report. The conduct of the audit is explained in the auditor's reports. The auditor finds that Bayer has complied, as appropriate, with the German Commercial Code, the German Stock Corporations Act and/or the International Financial Reporting Standards endorsed by the European Union, and issues an unqualified opinion on the financial statements of Bayer AG and the consolidated financial statements of the Bayer Group. The financial statements of Bayer AG, the consolidated financial statements of the Bayer Group, the combined management report and the audit reports were submitted to all members of the Supervisory Board. They were discussed in detail by the Audit Committee and at a meeting of the full Supervisory Board. The auditor submitted a report on both occasions and was present during the discussions.

We examined the financial statements of Bayer AG, the proposal for the use of the distributable profit, the consolidated financial statements of the Bayer Group and the combined management report. We found no objections, thus we concur with the result of the audit.

We have approved the financial statements of Bayer AG and the consolidated financial statements of the Bayer Group prepared by the Board of Management. The financial statements of Bayer AG are thus confirmed. We are in agreement with the combined management report and, in particular, with the assessment of the future development of the enterprise. We also concur with the dividend policy and the decisions concerning earnings retention by the company. We assent to the proposal for distribution of the profit, which provides for payment of a dividend of €1.90 per share.

The Supervisory Board would like to thank the Board of Management and all employees for their dedication and hard work in 2012.

Leverkusen, February 26, 2013
For the Supervisory Board:



WERNER WENNING
Chairman

Investor Information

Performance of Bayer Stock in 2012 [Graphic 2.1]

(indexed; 100 = Xetra closing price on December 31, 2011; source: Bloomberg)



2012 was a very good year for the German capital market, and especially for Bayer stock. Our company's shares were among the top performers with a yield of 50 percent on the year. The German stock index DAX rose 29 percent.

The Board of Management and Supervisory Board propose a dividend increase to €1.90 per share for 2012.

The stock market in 2012

MARKETS POST STRONG GAINS

2012 was dominated by global economic uncertainty and considerable volatility on the stock markets. Having risen more than 20 percent in the early months of the year, the DAX lost ground between the end of March and the beginning of June, at times slipping below 6,000 points to a level only slightly above the start of the year. From late June, however, the markets recovered, posting substantial rallies in some cases. The DAX closed 2012 at 7,612 points for a gain of 29 percent on the year.

The European equities index EURO STOXX 50 (performance index) rose by around 18 percent, ending the year at 4,630 points. The U.S. and Japanese stock markets also performed positively in 2012, with the S&P 500 gaining around 13 percent and the Nikkei 225 rising nearly 23 percent.

STEEP RISE IN BAYER'S SHARE PRICE

Bayer stock rose 46 percent during the year, with strong gains in the second and third quarters. Including the dividend of €1.65 per share paid at the end of April 2012, the stock performance came in at 50 percent, placing it well ahead of the DAX. Bayer stock ended 2012 at €71.89, only just below its high for the year of €72.95, which was also its all-time high at that point.

The EURO STOXX Health Care Index (performance index) rose by 27 percent in 2012, while the EURO STOXX Chemicals Index (performance index) climbed by 33 percent. Bayer therefore significantly outperformed these two sector indices as well.

Trading in Bayer stock on the Frankfurt Stock Exchange declined to an average of 2.7 million shares per trading day in 2012. Bayer had the third-highest free-float market capitalization in the DAX at year end.

Bayer Stock Data [Table 2.1]

		2011	2012
Earnings per share	€	2.99	2.96
Core earnings per share*	€	4.83	5.35
Gross cash flow per share	€	6.25	5.56
Equity per share	€	23.30	22.45
Dividend per share	€	1.65	1.90
Year-end price**	€	49.40	71.89
High for the year**	€	59.35	72.95
Low for the year**	€	36.82	47.97
Total dividend payment	€ million	1,364	1,571
Number of shares entitled to the dividend (Dec. 31)	million	826.95	826.95
Market capitalization (Dec. 31)	€ billion	40.9	59.4
Average daily share turnover on German stock exchanges	million	3.8	2.7
Price/EPS**		16.5	24.3
Price/core EPS**		10.2	13.4
Price/cash flow**		7.9	12.9
Dividend yield	%	3.3	2.6

* For details on the calculation of core earnings per share, see Combined Management Report, Chapter 7.3 "Core Earnings Per Share."
** Xetra closing prices (source: Bloomberg)

EXCELLENT REFINANCING CONDITIONS FOR BAYER ON THE BOND MARKET

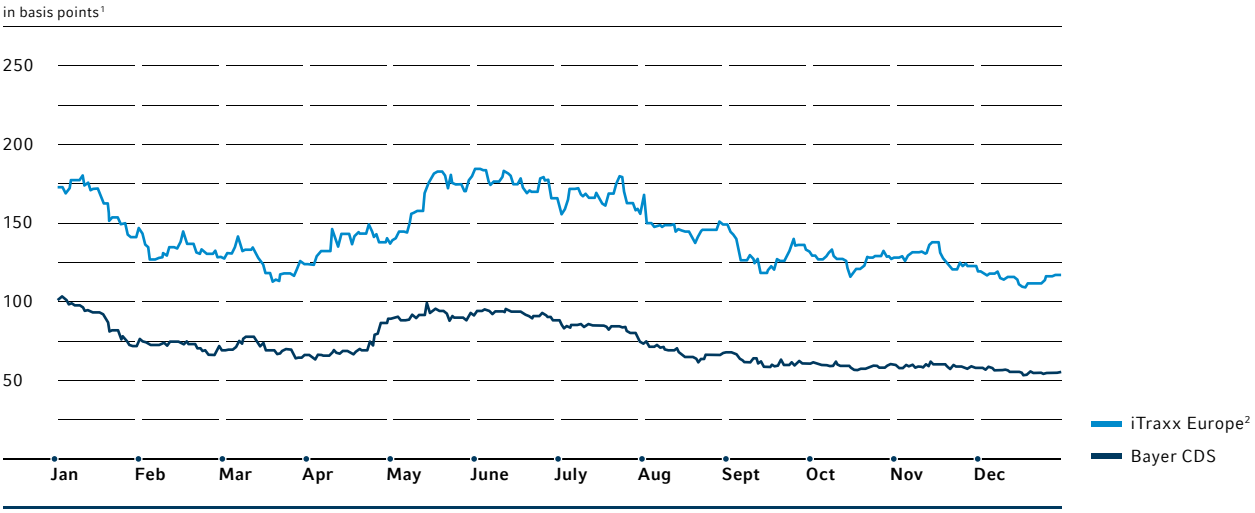
Issue volume on the corporate bond market reached a record level in 2012, with interest coupons at a historic low. Investor demand for corporate bonds was excellent, especially in the investment grade segment, where Bayer covers a major part of its financing requirements. This was partly because this investment class generated higher yields than other classes such as government bonds, and partly because financial institutions scaled back their issue volumes and investors were looking for alternatives. Despite this very positive environment, market trends continued to depend on political developments, which caused short-term volatility and clouded the picture particularly around mid-year.

Companies nevertheless continued to benefit from the steady decline in interest rates and simultaneously low risk premiums. The development of risk premiums is apparent from the trend in credit default swaps (CDS) shown in Graphic 2.2. On the derivatives market, the price of these tradable insurance contracts, which are used to hedge against default of a borrower, show how market participants rate a company's credit standing. CDS can therefore be taken as an indicator of the credit margin when raising debt. As the chart shows, volatility was again high in 2012, with achievable financing terms varying during the year. Financing could be obtained at extremely low cost in historical terms in the first and last thirds of the year.

Bayer used this favorable environment to issue a five-year bond with a nominal volume of JPY 30 billion on attractive terms in April 2012. Financing activities in 2012 also featured the maturing of a €2 billion ten-year bond issued in 2002 to partially finance the acquisition of Aventis CropScience. This bond was redeemed out of operational liquidity without any direct follow-on financing. Further details of outstanding bonds are given in Note [27] to the consolidated financial statements.

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [27]

Rates for Five-Year Credit Default Swaps (CDS) 2012 [Graphic 2.2]



[1] source: Bloomberg
[2] iTraxx Europe is a CDS index comprising the CDS of 125 companies (including financial institutions) with investment-grade ratings.

LONG-TERM RETURN ON BAYER STOCK REMAINS AHEAD OF THE MARKET

A long-term investor who purchased Bayer shares for €10,000 five years ago and reinvested all dividends would have seen the value of the position grow to €13,316 as of December 31, 2012, giving an average annual return of 5.9 percent.

Long-Term Returns on Bayer Stock in % p.a. (Dividends Reinvested) [Table 2.2]

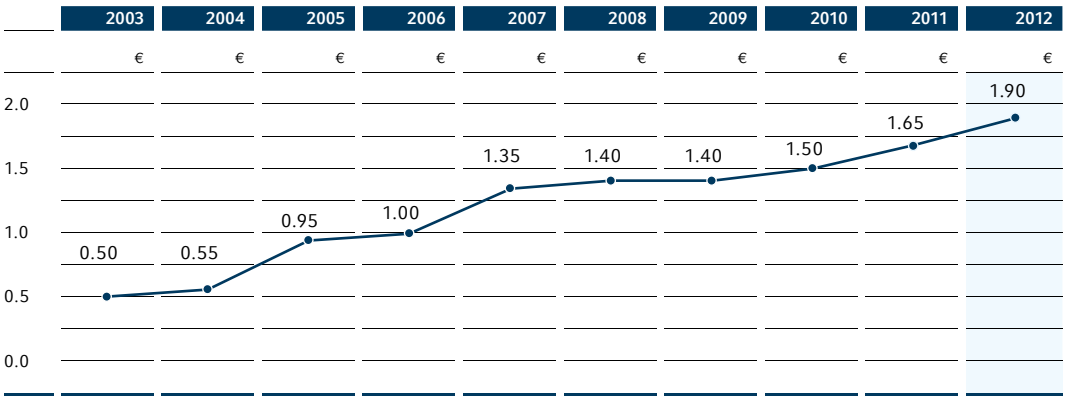
Annual returns	1 year 2012	3 years 2010–2012	5 years 2008–2012
	%	%	%
Bayer	+50.0	+11.8	+5.9
DAX	+29.1	+8.5	−1.2
DJ EURO STOXX 50	+18.1	−0.5	−6.5

DIVIDEND INCREASE TO €1.90 PER SHARE

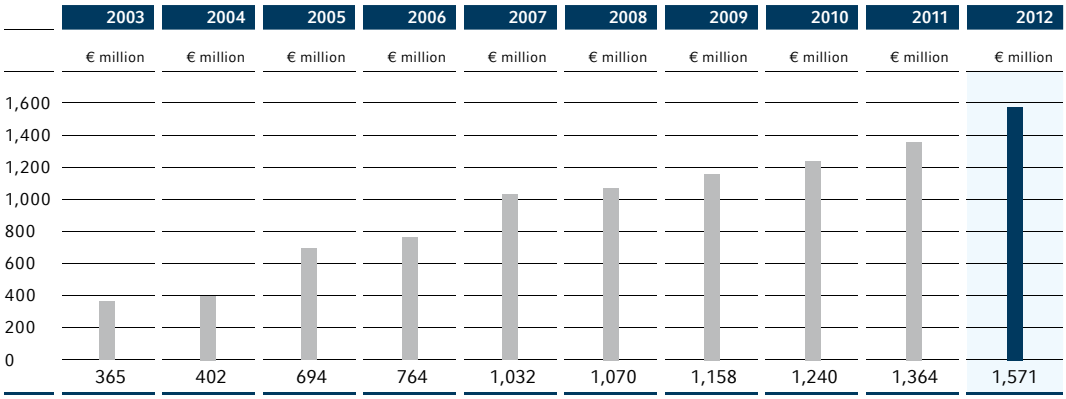
We again intend that our stockholders participate in the strong performance of our business last year. The Board of Management and the Supervisory Board will therefore propose to the Annual Stockholders' Meeting that the dividend be increased by €0.25 to €1.90 per share. This results in a payout ratio of nearly 36 percent calculated on core earnings per share, which is within the target corridor of 30 to 40 percent (for details on the calculation of core earnings per share, see Chapter 7.3 of the Combined Management Report).

The dividend yield calculated on the share price of €71.89 at year end 2012 amounts to 2.6 percent and the total dividend payment to €1,571 million.

Dividends Per Share [Graphic 2.3]



Total Dividend Payment [Graphic 2.4]



SUSTAINABLE INVESTMENT

In 2012 Bayer again qualified for inclusion in major sustainability indices that assess companies on the basis of economic, ecological and social criteria. Bayer stock is represented, for example, in the Dow Jones Sustainability World and Europe indices, the FTSE4Good Global and Europe indices, the Advanced Sustainable Performance Indices Eurozone and the NYSE Euronext Low Carbon Europe 100 Index. In 2012 the Carbon Disclosure Project (CDP) included Bayer in its Carbon Disclosure Leadership Index (CDLI) for the eighth consecutive year. This time Bayer garnered the overall first place across all industry sectors jointly with another company. In addition, Bayer was again included in the Carbon Performance Leadership Index (CPLI) with an "A" rating in recognition of its efforts to reduce CO_2 emissions.

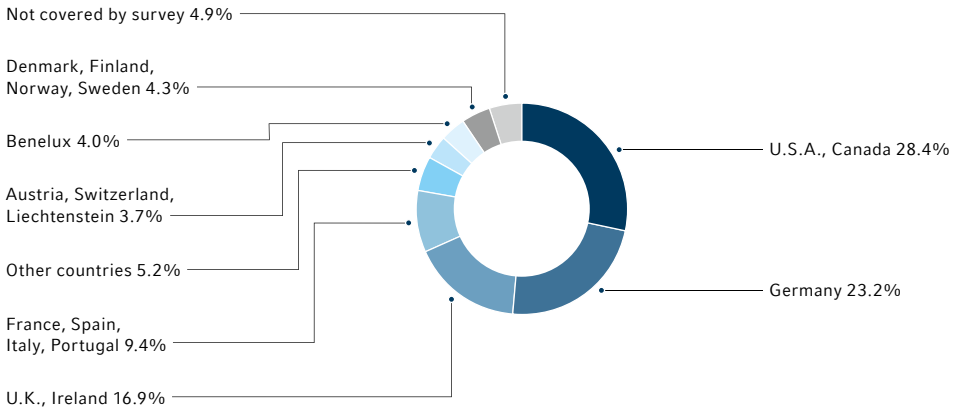
In 2012 we continued our dialogue about Bayer's sustainability commitment with market players whose investment decisions are aligned to ecological, social and governance criteria.

INTERNATIONAL OWNERSHIP STRUCTURE

At the end of 2012, approximately 280,000 stockholders were listed in our share register. Bayer has a 100 percent free float as defined by Deutsche Börse, the operator of the Frankfurt Stock Exchange.

An analysis of our ownership structure carried out in October 2012 shows the international distribution of our capital stock, with more than three-quarters of the shares held by foreign investors:

Ownership Structure by Country [Graphic 2.5]



DIALOGUE WITH THE CAPITAL MARKET

In 2012 we stepped up our intensive dialogue with the capital market. We attended 21 broker conferences, held 21 roadshows – often accompanied by members of the Board of Management – and took part in several field trips, visiting a total of 26 financial centers.

"Meet Management" conferences for investors and analysts, which have been well established in Germany for some years, were also held for the first time in New York and Tokyo. The positive feedback on the direct dialogue with members of the management boards of Bayer AG and the subgroups spurs us to further internationalize this concept in the future.

We also participated in a number of private investor forums, where we had further opportunities to describe Bayer's business, innovations, products and perspectives to a large number of interested investors.

INTERNET

For more information on our investor relations activities go to WWW.INVESTOR.BAYER.COM

Combined Management Report

of the Bayer Group and Bayer AG as of December 31, 2012

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For direct access to a chapter, simply click on its name.

1. Mission and Values

"Bayer: Science For A Better Life"

Bayer is a world-class innovation company. Our scientific achievements aim to help improve people's lives by addressing the great challenges of our time – the growing world population, an aging society and the need to use natural resources more efficiently.

- Throughout the world we are preventing, alleviating or curing diseases and improving diagnostic techniques.
- With our products for agriculture, we are helping farmers to provide an adequate supply of high-quality food, feed and plant-based raw materials.
- And our high-tech materials are making significant contributions in a variety of areas such as energy and resource efficiency, mobility, construction and home living.

We have spent many decades laying the foundations for achieving these goals and are the only global company to combine expertise in human, animal and plant health and in high-tech materials. Our focus on innovation is the key to maintaining or achieving leadership positions in all of our markets. It is also about creating value – for our customers, stockholders and employees, while at the same time considering the needs of other stakeholders in society.

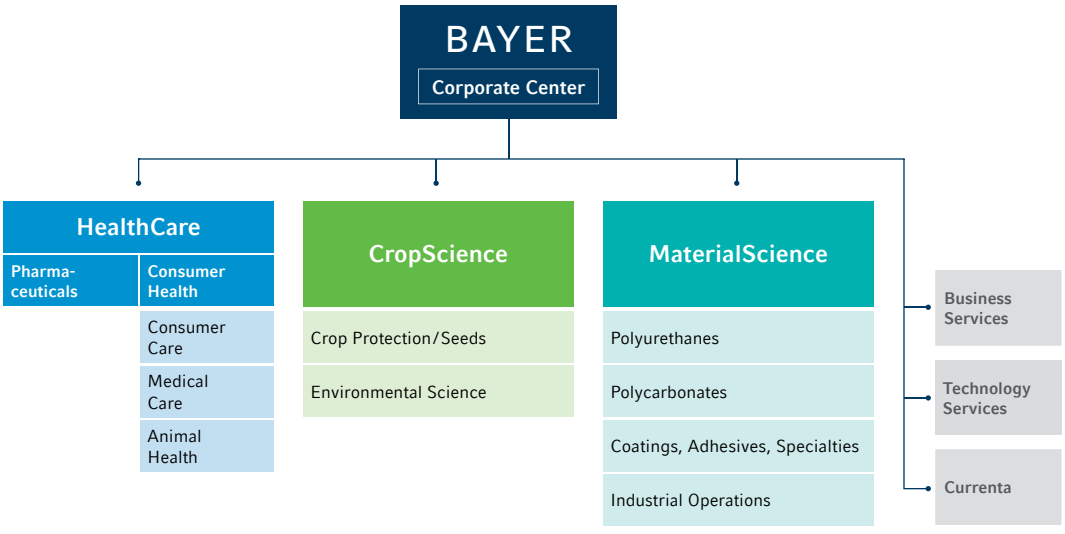
We are committed to operating sustainably and addressing our social and ethical responsibilities as a corporate citizen.

Our Bayer values of Leadership, Integrity, Flexibility and Efficiency – represented by the acronym LIFE – guide our actions as we work to accomplish our mission "Bayer: Science For A Better Life."

2. Corporate Structure

Bayer AG, headquartered in Leverkusen, Germany, is the strategic management holding company for the Bayer Group. Business operations are conducted by the HealthCare, CropScience and MaterialScience subgroups, supported by our three service companies.

Bayer Group Structure [Graphic 3.1]

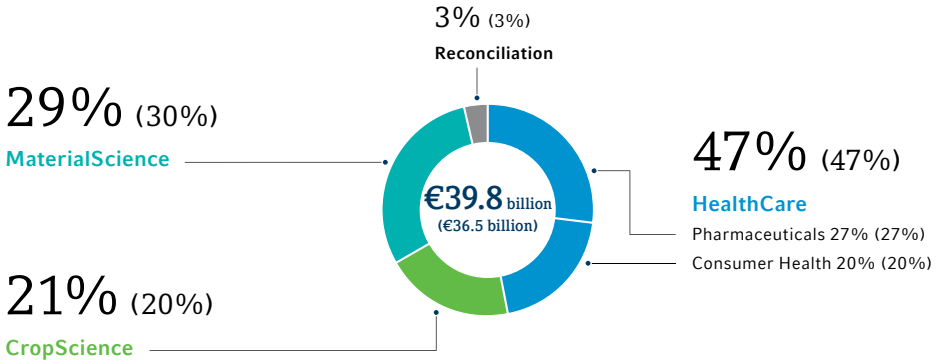


The globally operating **HealthCare** subgroup is divided into two reporting segments: Pharmaceuticals and Consumer Health. The Pharmaceuticals segment focuses on prescription products, especially for women's healthcare and cardiology and also in the fields of oncology, hematology and ophthalmology. Our Consumer Health segment includes the Consumer Care, Medical Care and Animal Health divisions. The main focus of the Consumer Care Division is on non-prescription medicines, dietary supplements and dermatology products. Medical Care comprises the businesses with blood glucose meters, contrast-enhanced diagnostic imaging equipment together with the necessary contrast agents, and mechanical systems for treating constricted or blocked blood vessels. The products of the Animal Health Division are destined for use in livestock and companion animals.

CropScience has businesses in seeds, crop protection and non-agricultural pest control. It is organized into two operating segments: Crop Protection/Seeds and Environmental Science. Crop Protection/Seeds markets a portfolio of high-value seeds and traits along with innovative chemical and biological pest management solutions, at the same time offering extensive service backup for modern, sustainable agriculture. Environmental Science focuses on non-agricultural applications, with a broad portfolio of pest control products and services for areas ranging from the home and garden sector to forestry.

MaterialScience develops, manufactures and markets high-performance products in the areas of polyurethanes, polycarbonates, coating and adhesive raw materials, and functional films. This subgroup also manufactures and markets selected inorganic basic chemicals. MaterialScience is organized into the Polyurethanes, Polycarbonates, and Coatings, Adhesives, Specialties business units, and the Industrial Operations area.

Share of Sales by Segment 2012 [Graphic 3.2]



2011 in parentheses

Our subgroups are supported by the Business Services, Technology Services and Currenta service companies, which are reported in the reconciliation under "All Other Segments." The reconciliation also includes the Corporate Center and consolidation effects.

Key Data by Subgroup and Segment [Table 3.1]

	Sales		EBIT		EBITDA before special items*	
	2011	2012	2011	2012	2011	2012
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**17,169**	**18,612**	**3,191**	**2,154**	**4,702**	**5,068**
Pharmaceuticals	9,949	10,803	1,897	1,075	2,972	3,203
Consumer Health	7,220	7,809	1,294	1,079	1,730	1,865
CropScience	**7,255**	**8,383**	**562**	**1,539**	**1,654**	**2,008**
MaterialScience	**10,832**	**11,503**	**633**	**597**	**1,171**	**1,251**
Reconciliation	**1,272**	**1,262**	**(237)**	**(330)**	**86**	**(43)**
Group	**36,528**	**39,760**	**4,149**	**3,960**	**7,613**	**8,284**

* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."

CHANGES IN CORPORATE STRUCTURE

In August 2012, we implemented organizational changes within the MaterialScience segment. The Vulkollan business with high-performance elastomers is no longer part of the Polyurethanes business unit but is reported under the Coatings, Adhesives, Specialties (CAS) business unit. The prior-year figures are restated accordingly.

In September 2012, we renamed the BioScience business unit within the CropScience segment to "Seeds." In addition, the Seed Treatment business unit was renamed to "SeedGrowth."

As of the fourth quarter of 2012, the Pharmaceuticals segment of the HealthCare subgroup is no longer divided into General Medicine and Specialty Medicine business units due to organizational changes.

3. Strategy

BUSINESS STRATEGY

As an innovation company with the mission "Bayer: Science For A Better Life," Bayer focuses on its core competencies in developing new solutions for the fast-growing, innovation-driven areas of health care, agriculture and high-tech materials. Based on this innovation capability and other core competencies, we are pursuing a value-creating strategy of sustainable and profitable growth in our businesses. In doing so we consistently exploit both organic and external growth opportunities while at the same time optimizing structures and processes and improving our cost base.

Portfolio: We plan to continue playing leading roles in attractive markets and to steadily expand the strong positions we already hold, placing special emphasis on the development of our life-science businesses. We also aim to leverage research synergies by gaining a better understanding of human, animal and plant biology. In MaterialScience, we intend to defend our market position through leading-edge process technologies. Investments in capacity expansions and new facilities are creating economies of scale and cost leadership that will help to strengthen our position and our profitability.

Growth: We are systematically investing in our innovation capabilities and maximizing the value of our research and development pipeline and our technological expertise. We are also taking advantage of opportunities in the emerging markets.

Productivity: Based on the maxim "More innovation – less administration," we are continuing our efforts to improve efficiency and simplify structures and processes throughout the Bayer Group.

HEALTHCARE

The health care sector worldwide is in a state of flux. Here we face four main challenges at the global level: an aging population, the growing demand for health care products in the emerging markets, greater patient and consumer influence on health-related decisions, and increasing insistence that the health care industry demonstrate the value added by new therapies. In addition, health systems everywhere need to find new ways to curb rising costs while safeguarding and improving the quality and reach of health care. Against this background, HealthCare's goal is to improve people's quality of life through innovation.

Focus on growth through innovation

The objective of our strategy is to achieve above-average, profitable and sustainable growth. To this end, our focus is on innovation and on further strengthening our position in the emerging markets. Our research pipeline contains projects with the potential to spawn innovative products that will improve treatment options, especially for chronic illnesses that particularly affect the growing number of older people in the global population. In selected areas we are working to round out our portfolio, partly with more value-based approaches and services. Here we also benefit from our expertise in the areas of prescription medicines and consumer products. In addition, we aim to further strengthen our position among the leading suppliers of non-prescription (OTC) medicines and expand our presence in the emerging markets. The umbrella brand "Bayer," with its excellent worldwide reputation, especially in the area of health care, will also have a central role to play.

Our largest segment in terms of sales – **Pharmaceuticals** – aims to become a leader in cardiovascular health and continue to expand the leading position it already holds in women's healthcare. In the area of specialty therapeutics, we are pursuing niche strategies to strengthen or defend our respective market positions. This focus on specific business areas is supplemented by growth strategies in the key markets of Brazil, China and Russia.

Innovative products are of central importance for the sustainability of the Pharmaceuticals business. We therefore plan to increase our investment in research and development in the future, focusing mainly on oncology and cardiovascular health with additional activities in gynecological therapies, hematology, ophthalmology and inflammatory diseases.

Our **Consumer Health** segment includes non-prescription medicines, dermatology products, blood glucose meters, medical devices and contrast agents, as well as pharmaceutical and grooming products for livestock and companion animals.

The goal of the Consumer Care Division is to build on our position in the over-the-counter (OTC) medicines market, with the focus on expanding our business in the emerging markets of Eastern Europe, Latin America and Asia. We primarily intend to exploit the organic growth potential of proven brands such as Aspirin™, Aleve™/naproxen, Bepanthen™/Bepanthol™ and Canesten™. In addition, we will continue to take advantage of external growth opportunities in the form of acquisitions or product inlicensing.

In the Medical Care Division, we are aiming to build on our competitive positions in the core areas of diabetes management, contrast agents and medical devices. We plan to expand our product range for people with diabetes by developing new blood glucose monitoring systems and innovative, customer-centric solutions to help them better manage the disease. In the Radiology and Interventional unit, further development work is ongoing in the areas of contrast agents, contrast agent injection systems, and thrombectomy and atherectomy systems. We are also developing new software and IT-based service solutions to optimize both contrast agent dosage and the clinical workflows involved in processing diagnostic data and images.

In the Animal Health Division, we aim to build on the leading position we hold among suppliers of products for companion animals and livestock. Our strategy is to achieve organic growth by focusing on countries and markets with long-term sales potential and successfully managing the life cycles of existing core brands. We aim to step up the development of new proprietary products to safeguard our long-term success. In addition, we are pursuing external growth opportunities through acquisitions and product inlicensing.

CROPSCIENCE

The earth's population is predicted to reach nine billion by 2050. As the number of people grows, natural resources are becoming scarcer – mainly due to insufficient arable land reserves, increasing urbanization and progressive climate change. The importance of sustainable agriculture and of higher crop yields and quality in producing sufficient food on a limited amount of land is increasing all the time.

CropScience, one of the leading innovation-driven companies in its industry, aligns its corporate planning to long-term trends in agricultural markets, offering products and customer-oriented solutions for the production of high-quality food, feed, fiber and renewable raw materials. Our goal is to raise agricultural productivity through innovation.

Strategy with four key elements

CropScience's strategy for future growth is built on four key elements: enhancing the Crop Protection portfolio, increasing customer centricity along the entire value chain, leading the way in innovation, and expanding the Seeds business.

We aim to **enhance our Crop Protection portfolio** by innovating, concentrating on core markets and focusing on integrated crop protection solutions. We had removed all WHO class I insecticides from our portfolio by the end of 2012. In line with our commitment to sustainable agriculture, crop protection products in this category are to be replaced with new, user-friendly and more environmentally compatible formulations. The acquisition of U.S. company AgraQuest, Inc. adds to our portfolio of biological crop protection solutions and strengthens our business, particularly in the area of fruits and vegetables.

Another major part of our strategy is to **increase customer centricity along the entire value chain** and improve channel management practices. We are also steadily expanding the successful business model of food chain partnerships in the form of collaborations with food producers and retailers.

To **lead the way in innovation**, we have refocused our research and development. A major focus of our activities is on seeds and on new growth areas such as plant health and stress tolerance. The goal of the new structure is to better exploit and develop our expertise in areas such as abiotic stress tolerance or yield improvement for the three research areas of seeds, small molecules and biologics. Accordingly, we have focused the new organization on integrating the three research areas. A joint global function will be established to steer regulatory issues.

Another key element in our strategy is the continuing **expansion of our Seeds business**. We plan to further strengthen our positions in our established crops – vegetables, rice, oilseed rape/canola and cotton – through both organic growth and acquisitions. We also intend to build significant positions in soybeans and wheat. For example, we intend to gain long-term access to high-quality breeding material through acquisitions, inlicensing and partnerships and to steadily expand our existing breeding expertise.

MATERIALSCIENCE

The growing world population and the resulting depletion of fossil resources, increasing mobility and progressive urbanization are among the global challenges of our time. People are also placing increasing importance on a modern and more comfortable lifestyle.

MaterialScience helps to address global challenges

With its high-tech materials and solutions, MaterialScience is helping to address these challenges in areas including energy and resource efficiency, environmentally friendly mobility and sustainable construction, which are particularly important growth drivers in emerging economies such as China, India and Brazil. We therefore expect the increase in volumes at MaterialScience to outpace global GDP growth in the long term.

Within the scope of our strategy, we endeavor to exploit profitable business opportunities in the emerging markets amid challenging competitive conditions while safeguarding our existing positions in the traditional markets. Among our core competencies is the development of new and better manufacturing processes for our products. These process innovations provide cost benefits that enable us to open up new applications in further markets and offer customized solutions.

We aim to earn a premium on our capital costs for the long term and thus contribute to increasing corporate value.

In the **Polyurethanes (PUR)** business unit, we aim to build on our global leadership position as an integrated raw material and systems supplier and achieve profitable growth.

We are focusing on further improving cost efficiency at our production facilities to safeguard our cost leadership for the long term. For example, we are continuing to develop the oxygen-depolarized cathode electrolysis process for producing chlorine from salt. This process enables lower energy consumption and a reduction in indirect CO_2 emissions compared with conventional technologies. We are also setting new standards in climate protection and efficiency with the new gas-phase phosgenation process for isocyanate production.

Investment in our production capacities is making an important contribution to the operational growth of this business unit and the improvement of our cost base. For example, we intend to consolidate our production of MDI and TDI at world-scale facilities. To service the rapidly growing demand in Asia, we also plan to further expand our MDI capacities in Shanghai, China.

The focus of our activities in the **Polycarbonates (PCS)** business unit is also on the Asian market. Asia accounts for more than 60% of the global polycarbonates market, which is forecast to grow considerably faster than global GDP in volume terms. There is particularly strong demand for this plastic in China.

We plan to gradually expand our PCS capacities in Shanghai, China. Here we continue to rely on the efficiency of our large-scale facilities.

In the **Coatings, Adhesives, Specialties (CAS)** business unit, we aim to maintain our leading position in the core business with polyurethane-based raw materials for the coatings and adhesives industry and open up new, related growth areas. Our chemical expertise and our years of formulating experience make us a preferred partner for customers in developing and supplying tailored solutions for innovative coating and adhesive applications.

4. Economic Environment

GLOBAL ECONOMY

Economic Environment [Table 3.2]

	Growth* in 2011	Growth* in 2012
World	+3.0%	+2.6%
European Union	+1.6%	−0.2%
of which Germany	+3.0%	+0.7%
United States	+1.8%	+2.3%
Emerging markets**	+6.2%	+4.9%

* real GDP growth, source: Global Insight (source for Germany: Federal Ministry of Economics and Technology)
** including about 50 countries defined by Global Insight as emerging markets in line with the World Bank

Global economic growth continued to slow in 2012. This was mainly due to the crisis in the eurozone, which caused tangible anxiety among consumers and investors. In addition, governments in many industrialized countries were forced to adopt a rigid consolidation course in view of the high levels of public debt. Growth was also hampered by the fact that oil prices remained high despite the downturn in the economy. There was, however, a positive stimulus from the still very expansionary monetary policy in the industrialized countries.

Economic Environments of the Subgroups [Table 3.3]

	Growth* in 2011	Growth* in 2012
HealthCare		
Pharmaceuticals market	+6%	+3%
Consumer care market	+5%	+4%
Medical care market	+2%**	+1%
Animal health market	+5%	+4%
CropScience		
Seeds and crop protection markets	> 10 %	> 10 %
MaterialScience: (main customer industries)		
Automotive	+3%	+6%
Construction	+3%	+3%
Electrical/electronics	+7%	+3%
Furniture	+6%	+4%

* Bayer's estimate, excluding pharmaceuticals market, source: IMS Health. Copyright 2013. All rights reserved; currency-adjusted; 2012 data provisional
** not currency-adjusted

HEALTHCARE

The more restrictive health policy framework held back the expansion of the **pharmaceuticals market** in the United States and the major European countries. On the other hand, demand for prescription medicines in the emerging markets rose as health services became accessible to increasingly broad segments of the population.

The rate of growth in the global **consumer care market** was slightly below the previous year. This was mainly due to a weak second half, especially in the United States and Europe. Demand for over-the-counter medicines in emerging markets such as Brazil, China and Russia remained at a high level. The slight upturn in the **medical care market** was partly the result of growth in the U.S. diabetes care market and in the market for contrast agents and medical equipment. The **animal health market** grew at the average rate experienced in recent years.

CROPSCIENCE

The global **seed and crop protection market** continued to show dynamic development in 2012. Demand for high-value seeds continued to rise considerably overall, and the global crop protection market also posted significant growth.

Farmers benefited from continuing high prices thanks to persistently low inventories for most agricultural commodities. This in turn triggered strong demand for high-value seeds and for crop protection products.

Growth rates in Europe were above the average, especially in the Eastern European countries, although demand in the Mediterranean countries declined.

Growth in the global seed and crop protection market last year was again driven by Latin America, particularly Brazil.

In North America, the average growth rates of recent years were considerably exceeded in 2012 despite the extreme summer drought, which particularly affected the Midwestern United States.

The generally positive market trend continued in 2012 in Asia/Pacific, too, although average growth for the region was slightly down from the previous year. The Chinese and Indian crop protection markets showed the strongest growth momentum.

MATERIALSCIENCE

The products of MaterialScience are mainly used in the automotive, construction, electrical/electronics and furniture industries.

Despite worsening growth perspectives in Europe, these principal global **customer industries** for MaterialScience developed satisfactorily overall in 2012. The progressive recovery in North America and the stabilization of the Asian markets had an especially positive impact on our business development.

The global **automotive industry** again showed robust growth overall. New vehicle registrations worldwide reached a record high in 2012. The drivers of this trend were sharply increased demand in the Asian countries and the continuing very positive development in North America. Demand in Western Europe was below the 2011 level, with a recovery not expected to begin before 2014 at the earliest.

The global **construction industry** grew at about the same rate in 2012 as in the prior year. Growth in the major Asian countries was robust, though somewhat weaker than in 2011. The U.S. construction industry failed to show a significant recovery, and the European debt crisis continued to dampen demand in Western Europe.

The global **electrical/electronics industry** experienced solid growth in 2012 as a result of its broad diversification. Demand for consumer electronics continued to increase, particularly in the BRIC countries (Brazil, Russia, India and China) in light of rising incomes. The sector registered positive growth momentum in Western Europe thanks to the deployment of new technologies and innovative solutions in response to climate change.

The development of the global **furniture industry** varied by region in 2012. While growth in Europe slowed down as the eurozone economy clouded over, the North American furniture market showed significant recovery potential. The Asian markets proved largely stable despite weaker growth rates.

NEW PRODUCTS CREATE OPTIMISM FOR THE FUTURE

Bayer: continuing growth momentum

// Group targets achieved in 2012 – sales and earnings before special items increase in all subgroups
// Sales €39.8 billion (Fx & portfolio adj. +5.3%)
// EBIT €4.0 billion (-4.6%) – net income €2.4 billion (-1.0%)
// Further accounting measures for legal claims
// EBITDA before special items €8.3 billion (+8.8%)
// Core earnings per share €5.35 (+10.8%)
// Encouraging growth in the emerging markets
// Steady progress with innovation pipeline strengthens life-science businesses
// Forecast for anniversary year 2013: continuing record development

5. Overview of Sales, Earnings and Financial Position

TARGET ATTAINMENT IN 2012

	Forecast (February 2012)	Raised forecast (July 2012)	Target attainment 2012
Group sales*	Increase of about 3% to approx. €37 billion	Increase of 4%–5% to approx. €39–40 billion	Increase of 5.3% to €39.8 billion
EBITDA before special items	Slight improvement	High-single-digit percentage increase	Increase of 8.8%
Core earnings per share	Slight improvement	Increase of about 10%	Increase of 10.8%

* currency- and portfolio-adjusted

FULL YEAR 2012

2012 was a very successful year for Bayer. We achieved our targets for the Group. Operationally, all of our subgroups posted growth in sales and earnings before special items, with particularly strong momentum in the life-science businesses. We also made good progress strategically, continuing to develop our innovation pipeline and bringing new products to market. We systematically strengthened our life-science businesses through acquisitions and considerably expanded our business in the emerging markets*. This makes us optimistic for 2013, in which we plan to grow sales and earnings once again.

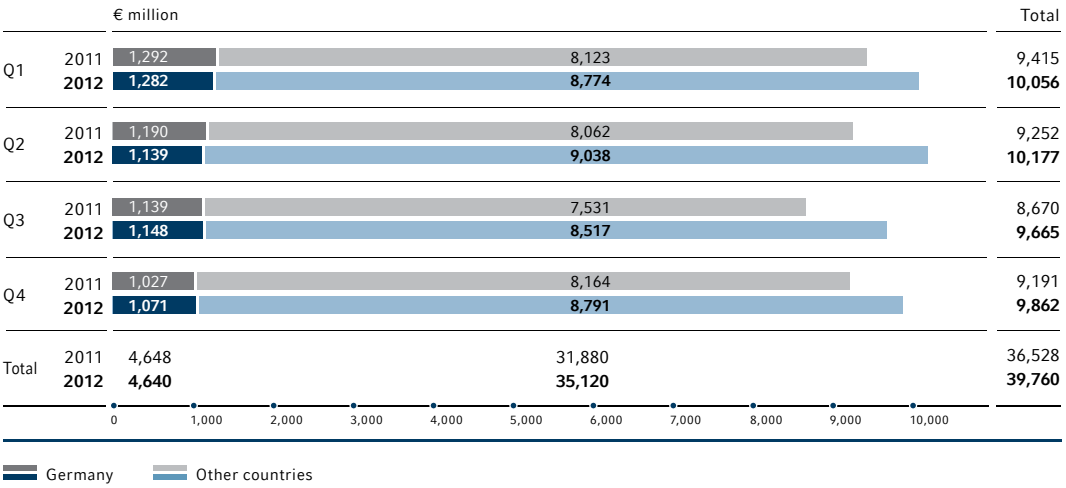
Changes in Sales [Table 3.4]

	2011	2012
	%	%
Volume	+3.4	+4.7
Price	+2.1	+0.6
Currency	–1.5	+4.0
Portfolio	+0.1	–0.5
Total	**+4.1**	**+8.8**

Adjusted for currency and portfolio effects (Fx & portfolio adj.), **sales** rose by 5.3% (reported: +8.8%) to a record €39,760 million (2011: €36,528 million). Sales of HealthCare advanced by 4.2% (Fx & portfolio adj.). Sales at CropScience moved ahead by 12.4% (Fx & portfolio adj.) in a favorable market environment. Sales of MaterialScience rose by 3.0% (Fx & portfolio adj.).

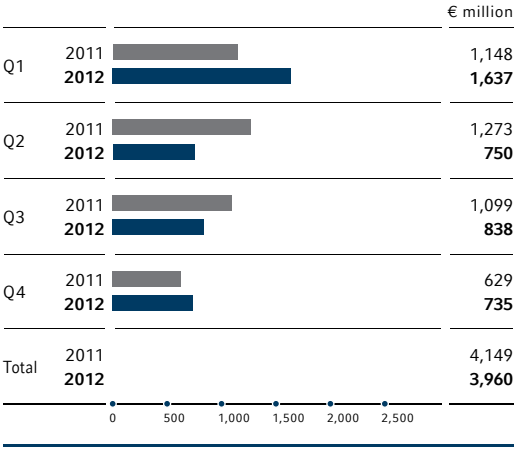
* For definition see Chapter 6.5 "Business Development in the Emerging Markets."

Bayer Group Quarterly Sales [Graphic 3.3]

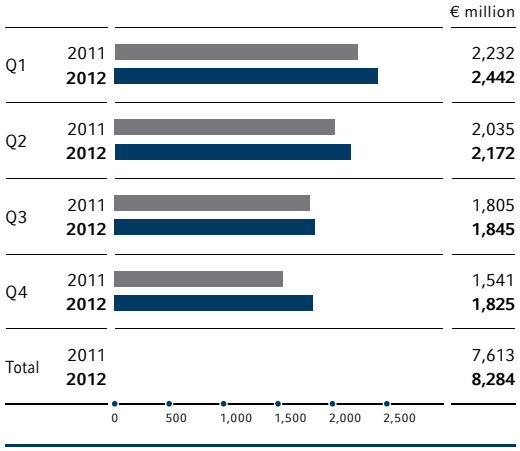


EBIT of the Bayer Group declined by 4.6% to €3,960 million (2011: €4,149 million) after special items of minus €1,711 million (2011: minus €876 million). The special items included €1,186 million in charges related to legal claims concerning the oral contraceptives Yasmin™/YAZ™. Of these charges, €455 million were taken in the fourth quarter of 2012 and mainly related to further accounting measures for venous clot injury cases of which we are currently aware and anticipated future cases. Other special charges were restructuring expenses of €396 million and impairment losses of €289 million on intangible assets. Special gains from divestitures came to €158 million, while adjustments of benefit entitlements resulted in gains of €114 million. EBIT before special items amounted to €5,671 million (2011: €5,025 million). **EBITDA** before special items increased by 8.8% to €8,284 million (2011: €7,613 million), driven by good business development and savings from the restructuring program successfully completed in 2012. Earnings of all the subgroups were also boosted by positive currency effects totaling about €400 million. HealthCare raised EBITDA before special items by 7.8% to €5,068 million (2011: €4,702 million) due to positive business development in both segments. EBITDA before special items of CropScience rose by a substantial 21.4% to €2,008 million (2011: €1,654 million), largely as a result of higher volumes. EBITDA before special items of MaterialScience improved by 6.8% to €1,251 million (2011: €1,171 million), mainly because of higher volumes.

Bayer Group Quarterly EBIT [Graphic 3.4]

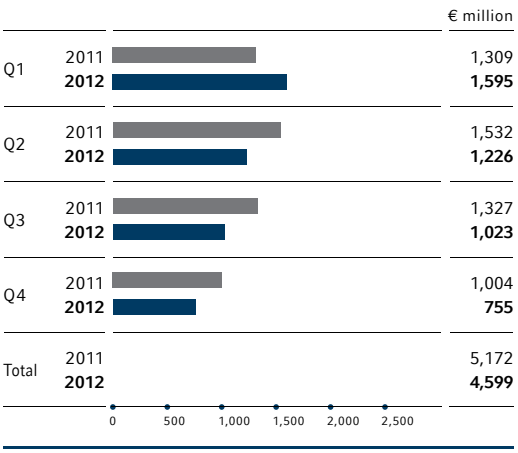


Bayer Group Quarterly EBITDA Before Special Items [Graphic 3.5]

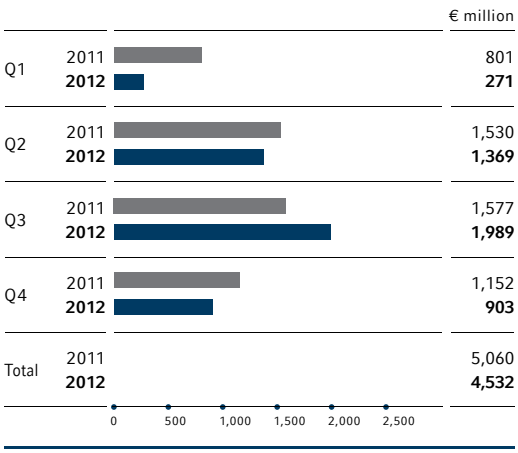


The **financial result** was minus €712 million (2011: minus €786 million), including net interest expense of €252 million (2011: €335 million), and **income before income taxes** thus amounted to €3,248 million (2011: €3,363 million). After tax expense of €752 million (2011: €891 million) and noncontrolling interest, **net income** for 2012 came in at €2,446 million (2011: €2,470 million). Earnings per share were €2.96 (2011: €2.99). Core earnings per share advanced by 10.8% to €5.35 (2011: €4.83), calculated as explained in Chapter 7.3 "Core Earnings Per Share."

Gross Cash Flow by Quarter [Graphic 3.6]



Net Cash Flow by Quarter [Graphic 3.7]



Gross cash flow receded by 11.1% in 2012 to €4,599 million (2011: €5,172 million). Net cash flow fell by 10.4% to €4,532 million (2011: €5,060 million). The increase in cash flows resulting from the improved operating performance was more than offset by a business-related increase in cash tied up in working capital and higher income tax payments. Net financial debt was level with December 31, 2011, at €7.0 billion, including a €1.0 billion contribution to the pension fund in the fourth quarter of 2012. The net amount recognized for post-employment benefits after deducting plan assets from the defined benefit obligation rose by €1.5 billion to €9.3 billion, mainly because of lower long-term interest rates on the capital market.

FOURTH QUARTER OF 2012

Group **sales** in the fourth quarter of 2012 rose by 5.5% (Fx & portfolio adj.) to €9,862 million (reported: +7.3%). Sales of HealthCare advanced by 5.1% (Fx & portfolio adj.) to €4,923 million (reported: +7.1%). Those of the Pharmaceuticals segment increased by 4.8% (Fx & portfolio adj.) to €2,867 million (reported: +7.0%), mainly due to encouraging sales growth in North America and the emerging economies, especially China. Business in the Consumer Health segment moved ahead by 5.4% (Fx & portfolio adj.) to €2,056 million (reported: +7.4%), driven by higher sales of the Consumer Care Division in all regions. CropScience sales increased by 9.1% (Fx & portfolio adj.) in the fourth quarter to €1,856 million (reported: +10.7%) as a result of higher volumes. Sales of MaterialScience rose by 4.8% (Fx & portfolio adj.) against the prior-year quarter, to €2,761 million (reported: +6.4%), thanks to volume and price increases.

EBIT of the Bayer Group climbed by 16.9% in the fourth quarter of 2012 to €735 million (Q4 2011: €629 million). Earnings were diminished by special items of minus €424 million (Q4 2011: minus €215 million), mainly comprising €543 million in accounting measures based on legal claims, €114 million in restructuring expenses, €158 million in divestiture gains and €59 million in gains from adjustments of benefit entitlements. EBIT before special items climbed by 37.3% to €1,159 million (Q4 2011: €844 million).

EBITDA before special items of the Bayer Group increased in the fourth quarter of 2012 by 18.4% to €1,825 million (Q4 2011: €1,541 million). HealthCare raised EBITDA before special items by 13.7% to €1,342 million (Q4 2011: €1,180 million). EBITDA before special items of CropScience came in at €289 million (Q4 2011: €273 million), up 5.9%. EBITDA before special items at MaterialScience climbed by 140.6% compared with a weak prior-year quarter to €255 million (Q4 2011: €106 million).

After a financial result of minus €161 million (Q4 2011: minus €178 million), income before income taxes was €574 million (Q4 2011: €451 million). After taxes and non-controlling interest, net income came in at €374 million (Q4 2011: €397 million). Earnings per share were €0.45 (Q4 2011: €0.48). Core earnings per share rose to €1.00 (Q4 2011: €0.97), calculated as explained in Chapter 7.3 "Core Earnings Per Share."

Gross cash flow of the Bayer Group came in 24.8% below the prior-year quarter at €755 million (Q4 2011: €1,004 million). Net cash flow fell by 21.6% to €903 million (Q4 2011: €1,152 million). This cash flow development was mainly the result of higher tax payments and less working capital release. Net financial debt rose by €0.2 billion in the fourth quarter of 2012 to €7.0 billion (September 30, 2012: €6.8 billion), including a €1.0 billion contribution to the pension fund.

Key Data by Subgroup and Segment [Table 3.5]

	Sales		EBIT		EBITDA before special items*	
	4th Quarter 2011	4th Quarter 2012	4th Quarter 2011	4th Quarter 2012	4th Quarter 2011	4th Quarter 2012
	€ million	€ million	€ million	€ million	€ million	€ million
HealthCare	**4,595**	**4,923**	**770**	**541**	**1,180**	**1,342**
Pharmaceuticals	2,680	2,867	471	157	758	827
Consumer Health	1,915	2,056	299	384	422	515
CropScience	**1,676**	**1,856**	**47**	**241**	**273**	**289**
MaterialScience	**2,596**	**2,761**	**(4)**	**92**	**106**	**255**
Reconciliation	**324**	**322**	**(184)**	**(139)**	**(18)**	**(61)**
Group	**9,191**	**9,862**	**629**	**735**	**1,541**	**1,825**

* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."



6. Business Development by Subgroup, Segment and Region

6.1 HealthCare

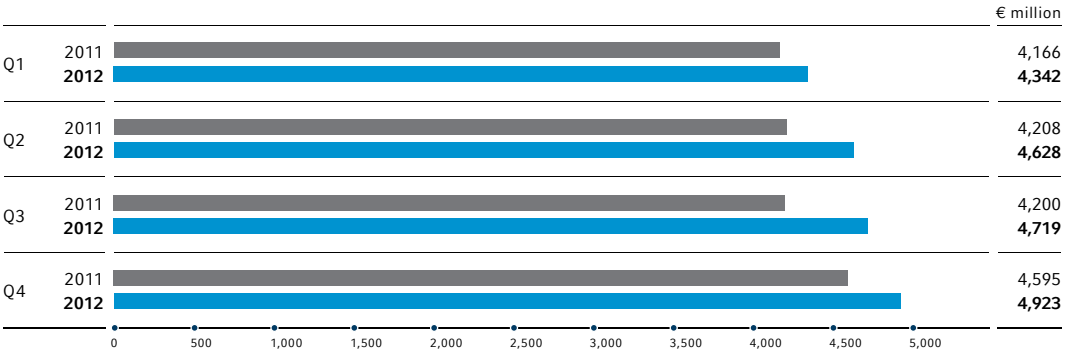
Key Data – HealthCare [Table 3.6]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**4,595**	**4,923**	**+7.1**	**+5.1**	**17,169**	**18,612**	**+8.4**	**+4.2**
Change in sales								
Volume	+1.6%	+5.3%			+2.2%	+3.7%		
Price	+0.9%	−0.2%			+0.2%	+0.5%		
Currency	+0.1%	+2.4%			−1.2%	+4.5%		
Portfolio	+0.2%	−0.4%			+0.3%	−0.3%		
Sales by segment								
Pharmaceuticals	2,680	2,867	+7.0	+4.8	9,949	10,803	+8.6	+4.2
Consumer Health	1,915	2,056	+7.4	+5.4	7,220	7,809	+8.2	+4.2
Sales by region								
Europe	1,651	1,732	+4.9	+3.6	6,376	6,484	+1.7	+0.9
North America	1,161	1,281	+10.3	+6.1	4,360	4,961	+13.8	+5.5
Asia/Pacific	1,004	1,105	+10.1	+7.1	3,656	4,203	+15.0	+6.2
Latin America/Africa/Middle East	779	805	+3.3	+2.1	2,777	2,964	+6.7	+5.6
EBIT	**770**	**541**	**−29.7**		**3,191**	**2,154**	**−32.5**	
Special items	*(45)*	*(460)*			*(176)*	*(1,582)*		
EBIT before special items*	***815***	***1,001***	***+22.8***		***3,367***	***3,736***	***+11.0***	
EBITDA*	**1,110**	**878**	**−20.9**		**4,502**	**3,815**	**−15.3**	
Special items	*(70)*	*(464)*			*(200)*	*(1,253)*		
EBITDA before special items*	***1,180***	***1,342***	***+13.7***		***4,702***	***5,068***	***+7.8***	
EBITDA margin before special items*	25.7%	27.3%			27.4%	27.2%		
Gross cash flow**	**926**	**584**	**−36.9**		**3,254**	**2,614**	**−19.7**	
Net cash flow**	**1,126**	**1,061**	**−5.8**		**3,357**	**3,543**	**+5.5**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales and Sales by segment; Fx adj.: Sales by region)
* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."
** For definition see Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

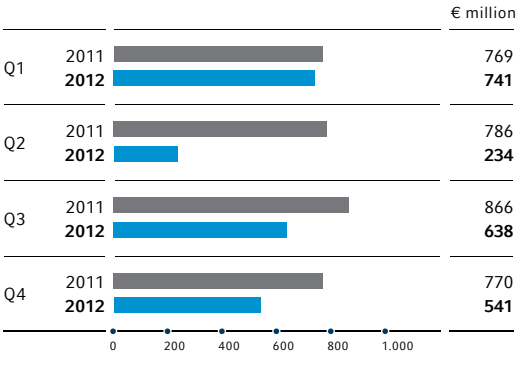
Sales of the **HealthCare** subgroup rose by 4.2% (Fx & portfolio adj.) in 2012 to €18,612 million (reported: +8.4%), with both the Pharmaceuticals and the Consumer Health segments contributing to this growth. Business developed especially well in the emerging markets and in North America.

HealthCare Quarterly Sales [Graphic 3.8]

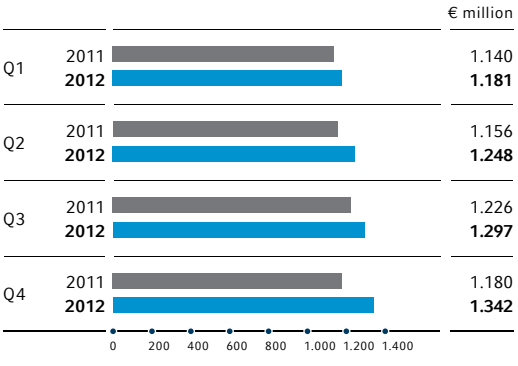


EBIT of the HealthCare subgroup fell in 2012 by 32.5% to €2,154 million. This drop in earnings was mainly due to special items of minus €1,582 million (2011: minus €176 million). EBIT before special items rose by 11.0% to €3,736 million. **EBITDA** before special items increased by 7.8% to €5,068 million. This was mainly attributable to the positive business development in both segments – especially as a result of volume-related sales growth – and to currency effects.

HealthCare Quarterly EBIT [Graphic 3.9]



HealthCare Quarterly EBITDA Before Special Items [Graphic 3.10]



PHARMACEUTICALS

Key Data – Pharmaceuticals [Table 3.7]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**2,680**	**2,867**	**+7.0**	**+4.8**	**9,949**	**10,803**	**+8.6**	**+4.2**
Sales by region								
Europe	946	989	+4.5	+3.2	3,658	3,678	+0.5	−0.2
North America	532	601	+13.0	+8.8	2,048	2,370	+15.7	+7.7
Asia/Pacific	705	775	+9.9	+7.5	2,527	2,943	+16.5	+7.5
Latin America/Africa/Middle East	497	502	+1.0	−0.2	1,716	1,812	+5.6	+4.5
EBIT	**471**	**157**	**−66.7**		**1,897**	**1,075**	**−43.3**	
Special items	*(27)*	*(437)*			*(145)*	*(1,223)*		
EBIT before special items*	***498***	***594***	***+19.3***		***2,042***	***2,298***	***+12.5***	
EBITDA*	**698**	**384**	**−45.0**		**2,795**	**1,993**	**−28.7**	
Special items	*(60)*	*(443)*			*(177)*	*(1,210)*		
EBITDA before special items*	***758***	***827***	***+9.1***		***2,972***	***3,203***	***+7.8***	
EBITDA margin before special items*	28.3%	28.8%			29.9%	29.6%		
Gross cash flow**	**580**	**224**	**−61.4**		**1,992**	**1,294**	**−35.0**	
Net cash flow**	**701**	**543**	**−22.5**		**2,077**	**2,260**	**+8.8**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."
** For definition see Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Pharmaceuticals** segment in 2012 came in at €10,803 million, up 4.2% (Fx & portfolio adj.) from the prior year. Growth was achieved mainly in North America and the emerging markets, particularly China. There was no overall sales gain in Europe due to the adverse economic conditions and a difficult health policy environment.

Best-Selling Pharmaceuticals Products [Table 3.8]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Betaferon™/Betaseron™	281	329	+17.1	+14.5	1,117	1,216	+8.9	+4.2
Kogenate™	273	298	+9.2	+6.3	1,075	1,182	+10.0	+5.2
YAZ™/Yasmin™/Yasminelle™	290	270	−6.9	−8.4	1,070	1,045	−2.3	−5.0
Nexavar™	205	212	+3.4	+1.3	725	792	+9.2	+4.2
Mirena™	157	135	−14.0	−17.1	581	677	+16.5	+9.4
Adalat™	171	169	−1.2	−4.5	640	670	+4.7	−2.3
Avalox™/Avelox™	131	123	−6.1	−9.3	486	486	0.0	−5.0
Aspirin™ Cardio	113	129	+14.2	+12.4	404	476	+17.8	+12.3
Glucobay™	96	99	+3.1	−1.3	362	408	+12.7	+3.6
Xarelto™	31	131	+322.6	+314.7	86	322	+274.4	+265.9
Levitra™	93	87	−6.5	−8.0	332	307	−7.5	−9.1
Cipro™/Ciprobay™	62	56	−9.7	−12.7	232	229	−1.3	−5.1
Zetia™	55	57	+3.6	+5.1	179	207	+15.6	+7.5
Diane™	49	49	0.0	−1.7	182	194	+6.6	+4.9
Fosrenol	43	50	+16.3	+16.5	147	187	+27.2	+18.0
Total	**2,050**	**2,194**	**+7.0**	**+4.6**	**7,618**	**8,398**	**+10.2**	**+5.2**
Proportion of Pharmaceuticals sales	76%	77%			77%	78%		

Fx adj. = currency-adjusted

Our anticoagulant Xarelto™ contributed significantly to sales growth in the Pharmaceuticals segment. Sales advanced strongly in all regions – particularly in Germany, the United States and Japan – following further product launches and indication expansions. Business with our hormone-releasing intrauterine device Mirena™ developed positively in all regions, especially in the United States due to higher volumes. Sales of the blood-clotting product Kogenate™ advanced due to higher volumes that mainly resulted from tender business in Australia. The growth in sales of our multiple sclerosis drug Betaferon™/Betaseron™ was mainly attributable to price increases in the United States, while sales in other countries declined. Sales of the cancer drug Nexavar™ moved ahead, particularly in the United States and China and helped by tender business in Latin America.

Sales of Aspirin™ Cardio to prevent heart attacks and of our oral diabetes treatment Glucobay™ rose considerably, largely thanks to the steady expansion of our marketing activities in China. Sales of Adalat™ to treat high blood pressure and coronary heart disease also rose strongly in China. However, Adalat™ sales posted a slight overall decline on a currency-adjusted basis, mainly as a result of mandatory price reductions in Japan.

Sales of our erectile dysfunction treatment Levitra™ and the antibiotic Avalox™/Avelox™ were down, particularly in the United States, for reasons that included the partial restructuring of distribution for general medicine products. The decline for Avalox™/Avelox™ was partly offset by higher sales to a major customer in Western Europe and business growth in China. Sales of the YAZ™/Yasmin™/Yasminelle™ line of oral contraceptives receded, primarily as a result of generic competition in Western Europe, although business developed positively in the Asia/Pacific region.

Our Pharmaceuticals business was strengthened by initial sales of our cancer drug Stivarga™ (active ingredient: regorafenib) in the United States – 2012 sales: €32 million – and of Eylea™ (active ingredient: aflibercept) to treat wet age-related macular degeneration – 2012 sales: €14 million.

In the Pharmaceuticals segment, **EBIT** fell by 43.3% in 2012, to €1,075 million, reflecting special items of minus €1,223 million (2011: minus €145 million). These included €1,160 million in charges related to legal claims concerning the oral contraceptives Yasmin™/YAZ™. EBIT before special items advanced by 12.5% to €2,298 million. **EBITDA** before special items increased by 7.8% to €3,203 million. Major contributors to this growth in earnings were the volume-driven sales increase and positive currency effects. However, earnings were diminished by higher expenditures for marketing new products, and for developing the business in the emerging markets, especially China.

CONSUMER HEALTH

Key Data – Consumer Health [Table 3.9]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**1,915**	**2,056**	**+7.4**	**+5.4**	**7,220**	**7,809**	**+8.2**	**+4.2**
Consumer Care	946	1,056	+11.6	+9.5	3,534	3,853	+9.0	+5.6
Medical Care	687	716	+4.2	+3.2	2,500	2,653	+6.1	+2.2
Animal Health	282	284	+0.7	−2.5	1,186	1,303	+9.9	+4.2
Sales by region								
Europe	705	743	+5.4	+4.1	2,718	2,806	+3.2	+2.3
North America	629	680	+8.1	+3.8	2,312	2,591	+12.1	+3.6
Asia/Pacific	299	330	+10.4	+6.0	1,129	1,260	+11.6	+3.1
Latin America/Africa/Middle East	282	303	+7.4	+6.0	1,061	1,152	+8.6	+7.4
EBIT	**299**	**384**	**+28.4**		**1,294**	**1,079**	**−16.6**	
Special items	*(18)*	*(23)*			*(31)*	*(359)*		
EBIT before special items*	***317***	***407***	***+28.4***		***1,325***	***1,438***	***+8.5***	
EBITDA*	**412**	**494**	**+19.9**		**1,707**	**1,822**	**+6.7**	
Special items	*(10)*	*(21)*			*(23)*	*(43)*		
EBITDA before special items*	***422***	***515***	***+22.0***		***1,730***	***1,865***	***+7.8***	
EBITDA margin before special items*	22.0%	25.0%			24.0%	23.9%		
Gross cash flow**	**346**	**360**	**+4.0**		**1,262**	**1,320**	**+4.6**	
Net cash flow**	**425**	**518**	**+21.9**		**1,280**	**1,283**	**+0.2**	

Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales; Fx adj.: Sales by region)
* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."
** For definition see Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **Consumer Health** segment in 2012 advanced by 4.2% (Fx & portfolio adj.) to €7,809 million, with all regions and divisions contributing to sales growth. The Consumer Care business showed a particularly positive development in the emerging markets.

Best-Selling Consumer Health Products [Table 3.10]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx adj. %	€ million	€ million	%	Fx adj. %
Contour™ (Medical Care)	170	193	+13.5	+10.7	640	722	+12.8	+8.5
Advantage™ product line (Animal Health)	84	92	+9.5	+5.8	420	495	+17.9	+10.6
Aspirin™ (Consumer Care)	123	138	+12.2	+9.9	471	494	+4.9	+1.3
Ultravist™ (Medical Care)	83	84	+1.2	−2.1	316	324	+2.5	−1.5
Aleve™/naproxen (Consumer Care)	76	87	+14.5	+10.6	285	323	+13.3	+5.4
Bepanthen™/Bepanthol™ (Consumer Care)	60	67	+11.7	+11.2	235	269	+14.5	+13.9
Canesten™ (Consumer Care)	56	65	+16.1	+11.8	224	250	+11.6	+7.8
Gadovist™/Gadavist™ (Medical Care)	44	60	+36.4	+33.0	160	209	+30.6	+27.2
One A Day™ (Consumer Care)	47	53	+12.8	+7.3	174	196	+12.6	+4.0
Iopamiron™ (Medical Care)	52	46	−11.5	−8.1	185	174	−5.9	−12.3
Total	**795**	**885**	**+11.3**	**+8.6**	**3,110**	**3,456**	**+11.1**	**+6.2**
Proportion of Consumer Health sales	42%	43%			43%	44%		

2011 figures restated
Fx adj.= currency-adjusted
Sales of Aspirin™ (including Aspirin™ Complex) – including Aspirin™ Cardio, which is reflected in sales of the Pharmaceuticals segment – increased by 10.9% (Fx adj. +6.4%) in 2012 to €970 million (2011: €875 million). Total sales of this product in the fourth quarter of 2012 rose by 13.1% to €267 million (Q4 2011: €236 million), and by 11.0% on a currency-adjusted basis.

Our **Consumer Care** Division achieved above-market sales growth of 5.6% (Fx & portfolio adj.) to €3,853 million. The encouraging sales gains were mainly attributable to intensified marketing activities, which boosted sales of products such as our Bepanthen™/Bepanthol™ skincare line, especially in Russia and Brazil, and the antifungal Canesten™, particularly in Germany. The growth in sales of our analgesic Aleve™/naproxen resulted mainly from higher volumes in the United States. Sales of our pain-reliever Aspirin™ showed a small increase, largely as a result of new launches in the United States.

Sales of the **Medical Care** Division rose by 2.2% (Fx & portfolio adj.) to €2,653 million. The positive development of our Diabetes Care business – despite price and reimbursement pressure – contributed substantially to this increase. Sales growth was primarily attributable to the Contour™ line of blood glucose meters, which posted gains in all regions, mainly due to the launch of Contour™ Next. Sales of our contrast agent and medical equipment business matched the prior year. In the area of contrast agents for magnetic resonance imaging (MRI), we raised sales of Gadovist™/Gadavist™, particularly in the United States. This increase was partly due to the switch from Magnevist™, sales of which steadily receded.

The **Animal Health** Division lifted sales by 4.2% (Fx & portfolio adj.) to €1,303 million. Business with our Advantage™ line of flea, tick and worm control products developed particularly well in the United States and Europe.

EBIT of the **Consumer Health** segment fell by 16.6% to €1,079 million, due especially to special items of minus €359 million (2011: minus €31 million) that resulted chiefly from impairment losses on intangible assets, including the Medrad company name and brand. EBIT before special items amounted to €1,438 million (+8.5%). **EBITDA** before special items grew by 7.8% to €1,865 million, primarily as a result of the volume-related increase in sales and positive currency effects. However, earnings were held back by higher marketing expenses.



6.2 CropScience

Key Data – CropScience [Table 3.11]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**1,676**	**1,856**	**+10.7**	**+9.1**	7,255	**8,383**	**+15.5**	**+12.4**
Change in sales								
Volume	+3.3%	+9.0%			+9.7%	+11.6%		
Price	−0.5%	+0.1%			−0.8%	+0.8%		
Currency	−0.4%	+1.9%			−2.3%	+3.8%		
Portfolio	−1.0%	−0.3%			−0.4%	−0.7%		
Sales by business group								
Crop Protection/Seeds	1,528	1,682	+10.1	+8.4	6,629	7,703	+16.2	+13.1
Environmental Science	148	174	+17.6	+16.2	626	680	+8.6	+5.3
Sales by region								
Europe	380	393	+3.4	+2.9	2,505	2,706	+8.0	+7.5
North America	286	287	+0.3	−2.8	1,703	2,154	+26.5	+18.7
Asia/Pacific	337	363	+7.7	+5.6	1,244	1,386	+11.4	+7.6
Latin America/Africa/Middle East	673	813	+20.8	+18.6	1,803	2,137	+18.5	+13.6
EBIT	**47**	**241**	**.**		**562**	**1,539**	**.**	
Special items	*(98)*	*79*			*(606)*	*13*		
EBIT before special items*	***145***	***162***	***+11.7***		***1,168***	***1,526***	***+30.7***	
EBITDA*	**251**	**368**	**+46.6**		**1,215**	**2,033**	**+67.3**	
Special items	*(22)*	*79*			*(439)*	*25*		
EBITDA before special items*	***273***	***289***	***+5.9***		***1,654***	***2,008***	***+21.4***	
EBITDA margin before special items*	16.3%	15.6%			22.8%	24.0%		
Gross cash flow**	**180**	**131**	**−27.2**		**900**	**1,320**	**+46.7**	
Net cash flow**	**(327)**	**105**	**.**		**691**	**899**	**+30.1**	

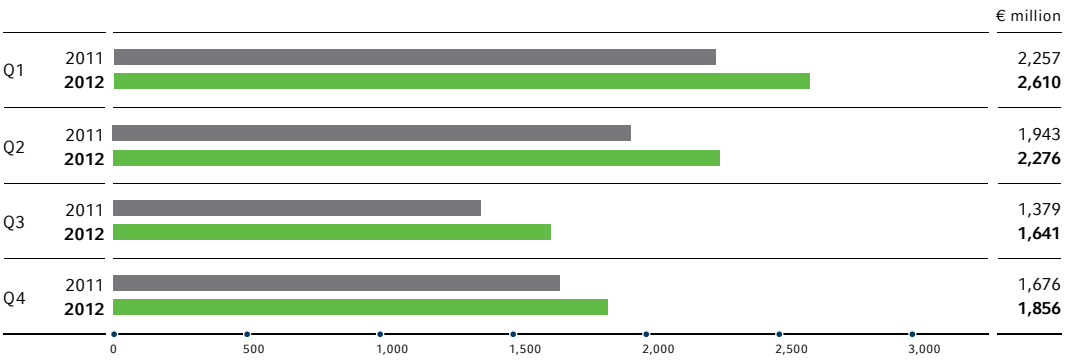
Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales and Sales by business group; Fx adj.: Sales by region)

* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."

** For definition see Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

CropScience increased **sales** in 2012 by a substantial 12.4% (Fx & portfolio adj.) to €8,383 million (reported: +15.5%) in an attractive market environment. This growth was due largely to good business with new products in Crop Protection and rapidly expanding sales of Seeds. Environmental Science also developed favorably. The realignment of our marketing and distribution activities and streamlining of the product range contributed to the gratifying performance.

CropScience Quarterly Sales [Graphic 3.11]



Sales at **Crop Protection/Seeds** climbed by 13.1% (Fx & portfolio adj.) in 2012, to €7,703 million. Crop Protection posted double-digit growth rates in all business units. We especially benefited from the expansion of the seed treatment products business (SeedGrowth) and a sharp rise in sales of new products such as the insecticide Belt™ and the fungicide Fox™. Sales of our herbicides also showed a pleasing improvement. Seeds registered positive development, also with double-digit growth in sales.

Sales – Crop Protection/Seeds [Table 3.12]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx & p adj. %	€ million	€ million	%	Fx & p adj. %
Sales								
Herbicides	443	451	+1.8	+0.5	2,079	2,356	+13.3	+10.1
Fungicides	397	445	+12.1	+10.3	1,709	1,974	+15.5	+13.2
Insecticides	351	424	+20.8	+20.3	1,290	1,514	+17.4	+14.8
SeedGrowth	180	220	+22.2	+18.3	731	897	+22.7	+17.2
Crop Protection	1,371	1,540	+12.3	+10.6	5,809	6,741	+16.0	+12.9
Seeds	157	142	−9.6	−10.8	820	962	+17.3	+14.1
Crop Protection/Seeds	**1,528**	**1,682**	**+10.1**	**+8.4**	**6,629**	**7,703**	**+16.2**	**+13.1**

Fx & p adj. = currency- and portfolio-adjusted

At **Crop Protection**, all regions contributed to the sales increase.

Sales in **Europe** rose by 8.4% (Fx adj.) to €2,350 million. Here we were particularly successful with new products, which accounted for a considerably greater proportion of sales than in the prior year. Thanks to favorable market conditions, we significantly raised sales of seed treatment products, especially in cereals. Business development was also supported by strong sales of insecticides and fungicides. We saw good gains for herbicides, mainly in light of increased demand for products for fall application in cereals.

Sales in **North America** rose by 19.2% (Fx adj.) to €1,327 million. This increase was mainly the result of successful market penetration by our new products, a generally favorable market environment for broad-acre crops and relatively high prices for agricultural commodities. We achieved particularly high growth rates in the United States for herbicides and fungicides used in corn and cereals. The expansion

of business with insecticides was largely due to demand for our new products. Sales of seed treatment products were driven by the successful expansion of our business with Poncho™/Votivo™, especially in corn. In Canada, sales also developed positively, chiefly as a result of higher demand for our insecticides and fungicides.

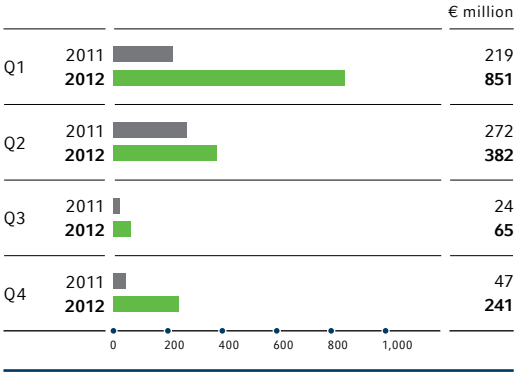
Sales in the **Asia/Pacific** region advanced by 8.6% (Fx adj.) to €1,164 million, mainly driven by our seed treatment products and herbicides. Our fungicides and insecticides businesses also saw considerable growth in sales. Business in our most important markets, India and Japan, trended positively. We attained the highest percentage sales growth in Australia, largely thanks to the increase in demand for our newly launched herbicide Sakura™. In China, we achieved significant growth for both fungicides and seed treatment products.

Sales in the **Latin America/Africa/Middle East** region advanced by 13.8% (Fx adj.) to €1,899 million, with a positive market environment leading to double-digit growth in all business units. In Latin America, we continued to experience good growth for our insecticides in Brazil and Argentina and scored a further improvement for seed treatment products (SeedGrowth). Sales of fungicides rose by a double-digit percentage despite adverse weather conditions at the start of the year. The expansion in our herbicides business was mainly due to gratifying sales gains for products used in corn and cotton in Brazil. Sales in Africa, too, saw double-digit growth, while business in the Middle East was level with the prior year.

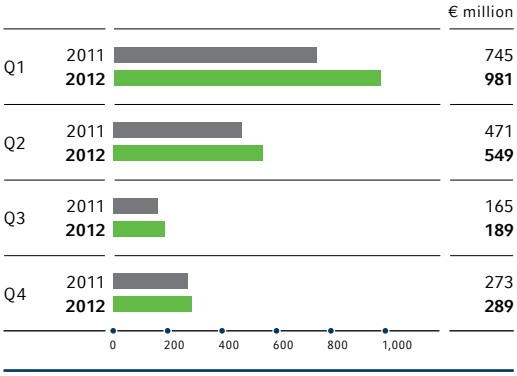
Sales of the **Seeds** business unit climbed by 14.1% (Fx & portfolio adj.) to €962 million. All regions contributed to this performance, particularly North America. Sales in our core crops of oilseed rape/canola, rice and cotton also grew by double-digit percentages. Business with our Nunhems™ vegetable seeds, however, was slightly below the previous year, partly because of adverse price development for vegetables.

Sales of the **Environmental Science** business unit increased by 5.3% (Fx & portfolio adj.) to €680 million, with products both for professional users and consumers posting gains. The Latin America/Africa/Middle East and North America regions developed positively, while Europe and Asia/Pacific came in at the prior-year level.

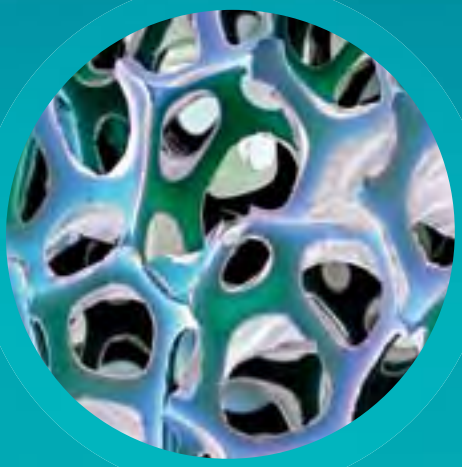
CropScience
Quarterly EBIT [Graphic 3.12]



CropScience
Quarterly EBITDA Before Special Items [Graphic 3.13]



EBIT of **CropScience** rose significantly in 2012 from €562 million to €1,539 million, including net special items of €13 million (2011: minus €606 million). The net special gain in 2012 contained the income from the sale of a site in India, this being largely offset by provisions established in connection with litigations concerning genetically modified rice (LL RICE) in the United States and restructuring charges at Crop Protection. EBIT before special items climbed by 30.7% to €1,526 million. **EBITDA** before special items improved by 21.4% to €2,008 million. Earnings growth was mainly the result of substantially higher volumes and positive currency effects. Manufacturing costs grew more slowly than sales. In addition, we incurred one-time gains of €52 million (2011: €38 million), mainly in connection with the outlicensing or divestment of active ingredients in Crop Protection.



6.3 MaterialScience

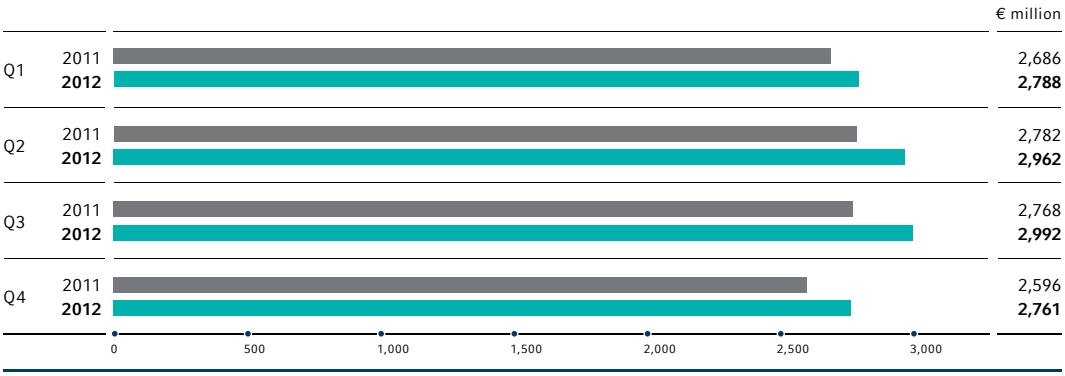
Key Data – MaterialScience [Table 3.13]

	4th Quarter 2011	4th Quarter 2012	Change		Full Year 2011	Full Year 2012	Change	
	€ million	€ million	%	Fx (& p) adj. %	€ million	€ million	%	Fx (& p) adj. %
Sales	**2,596**	**2,761**	**+6.4**	**+4.8**	10,832	**11,503**	**+6.2**	**+3.0**
Change in sales								
Volume	−3.6%	+2.6%			+1.0%	+2.4%		
Price	+3.6%	+2.2%			+7.2%	+0.6%		
Currency	+0.4%	+2.2%			−1.7%	+3.9%		
Portfolio	+0.1%	−0.6%			+0.2%	−0.7%		
Sales by business unit								
Polyurethanes	1,322	1,473	+11.4	+9.1	5,357	5,995	+11.9	+7.9
Polycarbonates	667	669	+0.3	−2.7	2,893	2,823	−2.4	−7.1
Coatings, Adhesives, Specialties	439	451	+2.7	+5.5	1,923	1,972	+2.5	+3.5
Industrial Operations	168	168	0.0	−0.6	659	713	+8.2	+6.1
Sales by region								
Europe	1,004	1,027	+2.3	+2.2	4,413	4,411	0.0	−0.1
North America	519	579	+11.6	+7.1	2,109	2,441	+15.7	+6.9
Asia/Pacific	727	771	+6.1	+1.7	2,894	3,149	+8.8	+0.4
Latin America/Africa/Middle East	346	384	+11.0	+10.7	1,416	1,502	+6.1	+6.6
EBIT	**(4)**	**92**	**.**		**633**	**597**	**−5.7**	
Special items	*44*	*(1)*			*44*	*(32)*		
EBIT before special items*	***(48)***	***93***	**.**		***589***	***629***	***+6.8***	
EBITDA*	**150**	**256**	**+70.7**		**1,215**	**1,224**	**+0.7**	
Special items	*44*	*1*			*44*	*(27)*		
EBITDA before special items*	***106***	***255***	**.**		***1,171***	***1,251***	***+6.8***	
EBITDA margin before special items*	4.1%	9.2%			10.8%	10.9%		
Gross cash flow**	**121**	**217**	**+79.3**		**939**	**947**	**+0.9**	
Net cash flow**	**510**	**244**	**−52.2**		**775**	**739**	**−4.6**	

2011 figures restated
Fx (& p) adj. = currency- (and portfolio-)adjusted (Fx & p adj.: Sales and Sales by business unit; Fx adj.: Sales by region)
* For definition see Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."
** For definition see Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

Sales of the **MaterialScience** subgroup rose in 2012 by 3.0% (Fx & portfolio adj.) to €11,503 million (reported: +6.2%). This growth was mainly the result of an overall increase in volumes, which were flat with the previous year in Europe but posted good gains in the other regions. In addition, we were able to slightly raise prices in all regions except Asia/Pacific.

MaterialScience Quarterly Sales [Graphic 3.14]



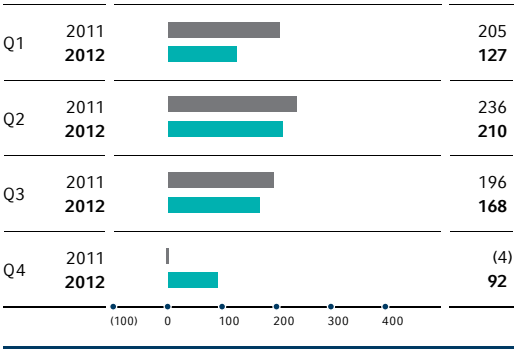
The **Polyurethanes** business unit raised sales by 7.9% (Fx & portfolio adj.) to €5,995 million. Contributing to this increase were higher volumes and prices in all product groups and regions. We achieved significant volume and price increases, particularly for diphenylmethane diisocyanate (MDI) and toluene diisocyanate (TDI).

The **Polycarbonates** business unit posted sales of €2,823 million, down 7.1% (Fx & portfolio adj.) year on year. The decline was attributable to a drop in selling prices worldwide that was mainly due to new production capacities. However, volumes as a whole were level year on year.

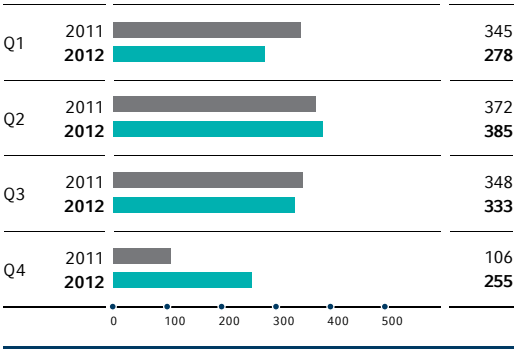
Sales in the **Coatings, Adhesives, Specialties** business unit moved forward by 3.5% (Fx & portfolio adj.) to €1,972 million as a result of the higher overall volumes and prices we achieved in nearly all regions.

Industrial Operations reported sales of €713 million (Fx & portfolio adj. + 6.1%) thanks to higher selling prices in North America and Europe. Volumes, however, were somewhat lower than in the prior year, mainly because of declines in Asia/Pacific and North America.

MaterialScience
Quarterly EBIT [Graphic 3.15]



MaterialScience
Quarterly EBITDA Before Special Items [Graphic 3.16]



EBIT of **MaterialScience** receded by 5.7% in 2012 to €597 million after net special charges of €32 million (2011: special gain of €44 million). Restructuring charges of €50 million were partly offset by gains from adjustments of benefit entitlements. EBIT before special items rose by 6.8% to €629 million. **EBITDA** before special items advanced by 6.8% to €1,251 million. This increase was mainly the result of higher volumes, savings from our efficiency improvement programs and positive currency effects. By contrast, earnings were diminished by higher raw material and energy costs.

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6.4 Business Development by Region

Sales by Region and Segment (by Market)

	Europe				North America					Asia/Pacific			
	Full Year 2011	Full Year 2012			Full Year 2011	Full Year 2012				Full Year 2011	Full Year 2012		
	€ million	€ million	% yoy	Fx adj. % yoy	€ million	€ million	% yoy	Fx adj. % yoy		€ million	€ million	% yoy	Fx adj. % yoy
HealthCare	**6,376**	**6,484**	**+1.7**	**+0.9**	**4,360**	**4,961**	**+13.8**	**+5.5**		**3,656**	**4,203**	**+15.0**	**+6.2**
Pharmaceuticals	3,658	3,678	+0.5	−0.2	2,048	2,370	+15.7	+7.7		2,527	2,943	+16.5	+7.5
Consumer Health	2,718	2,806	+3.2	+2.3	2,312	2,591	+12.1	+3.6		1,129	1,260	+11.6	+3.1
CropScience	**2,505**	**2,706**	**+8.0**	**+7.5**	**1,703**	**2,154**	**+26.5**	**+18.7**		**1,244**	**1,386**	**+11.4**	**+7.6**
MaterialScience	**4,413**	**4,411**	**0.0**	**−0.1**	**2,109**	**2,441**	**+15.7**	**+6.9**		**2,894**	**3,149**	**+8.8**	**+0.4**
Group (incl. reconciliation)	**14,441**	**14,730**	**+2.0**	**+1.5**	**8,177**	**9,576**	**+17.1**	**+8.8**		**7,842**	**8,766**	**+11.8**	**+3.9**

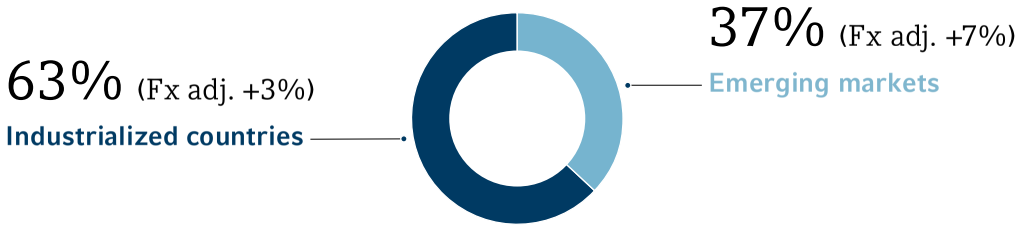
yoy = year on year; Fx. adj. = currency-adjusted

6.5 Business Development in the Emerging Markets

The emerging markets again made a disproportionately large contribution to sales growth in 2012. This applied particularly to HealthCare. For reporting purposes we have defined these markets as Asia (excluding Japan), Latin America, Eastern Europe, Africa and the Middle East.

Sales in these markets rose by 7.4% (Fx adj.) in 2012 to €14,796 million (2011: €13,290 million), with gratifying gains in Latin America, Asia and Eastern Europe. The emerging markets accounted for 37.2% of sales (2011: 36.4%).

Sales Development in 2012 [Graphic 3.17]



Currency-adjusted changes in parentheses

CROPSCIENCE

CropScience improved sales in th
(2011: €3,095 million), recording
We were especially successful in
The strongest sales growth in Asi
(2011: 42.7%) of total CropScien

MATERIALSCIENCE

At MaterialScience, sales in the e
(2011: €4,574 million). Here we a
Brazil, and also raised sales in Ea
by growth in China and India. The
(2011: 42.2%), mainly due to por

7. Earnings; Asset and Financial Position of the Bayer Group

7.1 Earnings Performance of the Bayer Group

Bayer Group Summary Income Statements [Table 3.15]

	2011	2012	Change
	€ million	€ million	%
Net sales	36,528	39,760	+8.8
Cost of goods sold	17,975	19,059	+6.0
Selling expenses	8,958	9,987	+11.5
Research and development expenses	2,932	3,013	+2.8
General administration expenses	1,713	1,866	+8.9
Other operating income / expenses	(801)	(1,875)	.
EBIT*	**4,149**	**3,960**	**–4.6**
Financial result	**(786)**	**(712)**	**+9.4**
Income before income taxes	**3,363**	**3,248**	**–3.4**
Income taxes	(891)	(752)	+15.6
Income after taxes	**2,472**	**2,496**	**+1.0**
of which attributable to non-controlling interest	2	50	.
of which attributable to Bayer AG stockholders (net income)	**2,470**	**2,446**	**–1.0**

* EBIT = earnings before financial result and taxes

Sales of the Bayer Group advanced by 8.8% year on year to €39,760 million, mainly due to growth in business at HealthCare and CropScience. Adjusted for currency and portfolio effects, the increase came to 5.3%.

The cost of goods sold rose by 6.0% to €19,059 million, largely because of the increase in volumes and higher raw material costs at MaterialScience. The ratio of the cost of goods sold to total sales was 47.9% (2011: 49.2%). Selling expenses increased by 11.5% to €9,987 million, amounting to 25.1% of sales (2011: 24.5%). This increase was primarily due to higher selling expenses at HealthCare, mainly for the marketing of new products. Research and development expenses, at €3,013 million, were 2.8% above the prior year. The ratio of R&D expenses to sales was 7.6% (2011: 8.0%). General administration expenses, at €1,866 million, exceeded the prior-year level by 8.9%. The ratio of general administration expenses to total sales thus remained flat with the previous year at 4.7%. The considerably greater negative balance of other operating income and expenses, at €1,875 million (2011: €801 million), resulted mainly from higher special charges related to legal claims (see also Chapter 7.2 "Calculation of EBIT(DA) Before Special Items").

SEE CHAPTER 7.2

EBIT declined by 4.6% in 2012 to €3,960 million.

The financial result improved by 9.4% to minus €712 million. It included interest cost of €320 million (2011: €336 million) for pension and other provisions, lower net interest expense of €252 million (2011: €335 million), a net exchange loss of €69 million (2011: €53 million) and a net loss of €52 million (2011: €45 million) from investments in affiliated companies. The improvement in the net interest position was mainly due to the reduction in financial debt. The decrease in interest expense for pension and other provisions resulted partly from the effect of lower interest rates on the interest cost for defined benefit plans, which is reported net of the expected return on plan assets.

Tax expense in 2012 amounted to €752 million. Income after taxes came in at €2,496 million. The positive balance of income and losses attributable to non-controlling interest, at €50 million, was €48 million higher than in the prior year, mainly on account of minority stockholders' interest in divestiture gains. Bayer Group net income for 2012 was €2,446 million.

7.2 Calculation of EBIT(DA) Before Special Items

Key performance indicators for the Bayer Group are EBIT before special items and EBITDA before special items. These indicators are reported in order to allow a more accurate assessment of business operations. The special items – comprising effects that are non-recurring or do not regularly recur or attain similar magnitudes – are detailed in the following table. EBITDA, EBITDA before special items and EBIT before special items are not defined in the International Financial Reporting Standards and therefore should only be regarded as supplementary information. The company considers EBITDA before special items to be a more suitable indicator of operating performance since it is not affected by depreciation, amortization, impairments or special items. By reporting this indicator, the company aims to give readers a clearer picture of the results of operations and ensure greater comparability of data over time. The EBITDA margin before special items, which is the ratio of EBITDA before special items to sales, serves as a relative indicator for the internal and external comparison of operational earning power.

Depreciation, amortization and impairments increased by 6.9% in 2012 to €2,960 million (2011: €2,769 million), comprising €1,637 million (2011: €1,425 million) in amortization and impairments of intangible assets and €1,323 million (2011: €1,344 million) in depreciation and impairments of property, plant and equipment. The impairments are reflected net of impairment loss reversals of €21 million (2011: €37 million). A total of €347 million (2011: €181 million) in depreciation, amortization and impairments constituted special items. This amount comprised €315 million (2011: €216 million) in impairment losses and €48 million (2011: €0 million) in depreciation and amortization, less €16 million (2011: €35 million) in impairment loss reversals.

Special Items Reconciliation [Table 3.16]

	EBIT* Full Year 2011	EBIT* Full Year 2012	EBITDA** Full Year 2011	EBITDA** Full Year 2012
	€ million	€ million	€ million	€ million
Before special items	**5,025**	**5,671**	**7,613**	**8,284**
HealthCare	**(176)**	**(1,582)**	**(200)**	**(1,253)**
Impairment losses	-	(305)	-	-
Restructuring	(230)	(182)	(219)	(142)
Litigations	-	(1,160)	-	(1,160)
Remeasurement of pension provisions	19	-	19	-
Adjustments to post-employment benefit entitlements (U.S.A.)	-	49	-	49
Impairment loss reversals	35	16	-	-
CropScience	**(606)**	**13**	**(439)**	**25**
Restructuring	(441)	(83)	(274)	(71)
Litigations	(229)	(83)	(229)	(83)
Remeasurement of pension provisions	14	-	14	-
Adjustments to post-employment benefit entitlements (U.S.A.)	-	21	-	21
Portfolio changes	50	158	50	158
MaterialScience	**44**	**(32)**	**44**	**(27)**
Restructuring	-	(50)	-	(45)
Adjustments to post-employment benefit entitlements (U.S.A.)	-	18	-	18
Portfolio changes	44	-	44	-
Reconciliation	**(138)**	**(110)**	**(100)**	**(109)**
Impairment losses	(38)	-	-	-
Restructuring	(70)	(81)	(70)	(80)
Litigations	(31)	(55)	(31)	(55)
Remeasurement of pension provisions	2	-	2	-
Adjustments to post-employment benefit entitlements (U.S.A.)	-	26	-	26
Portfolio changes	(1)	-	(1)	-
Total special items	**(876)**	**(1,711)**	**(695)**	**(1,364)**
After special items	**4,149**	**3,960**	**6,918**	**6,920**

* EBIT = earnings before financial result and taxes
** EBITDA = EBIT plus amortization and impairment losses on intangible assets and depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals

7.3 Core Earnings Per Share

Earnings per share according to IFRS are affected by the purchase price allocation for acquisitions and other special factors. To enhance comparability, we also determine core net income after eliminating amortization and impairments of intangible assets, impairments of property, plant and equipment, and special items in EBITDA including the related tax effects.

From this core net income we calculate core earnings per share in the same way as earnings per share. Core earnings per share form the basis for our dividend policy. Core earnings per share in 2012 amounted to €5.35 (2011: €4.83).

Core Earnings Per Share [Table 3.17]

	2011	2012
	€ million	€ million
EBIT (as per income statements)	**4,149**	**3,960**
Amortization and impairment losses on intangible assets	1,425	1,637
Impairment losses on property, plant and equipment	134	41
Special items (other than depreciation, amortization and impairments)	695	1,364
Core EBIT	**6,403**	**7,002**
Financial result (as per income statements)	(786)	(712)
Special items in the financial result	-	(73)
Income taxes (as per income statements)	(891)	(752)
Tax effects related to amortization, impairments and special items	(727)	(1,024)
Income after taxes attributable to non-controlling interest (as per income statements)	(2)	(50)
Special items in income after taxes attributable to non-controlling interest	-	35
Core net income	**3,997**	**4,426**
	Shares	Shares
Number of issued ordinary shares	**826,947,808**	**826,947,808**
Core earnings per share (€)	**4.83**	**5.35**

The calculation of earnings per share in accordance with IFRS is explained in Note [16] to the consolidated financial statements. Core net income, core earnings per share and core EBIT are not defined in IFRS.

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [16]

7.4 Value Management

CASH VALUE ADDED-BASED SYSTEM

One of the prime objectives of the Bayer Group is to sustainably increase enterprise value. We use a Group-wide value management system to plan, control and monitor our businesses. An important value-based indicator is the cash value added (CVA), which shows the degree to which the cash flows needed to cover the costs of equity and debt and of reproducing depletable assets have been generated. If the CVA is positive, the respective company or business entity has exceeded the minimum requirements and has created value. If it is negative, the anticipated capital and asset reproduction costs have not been earned. The CVA is an indicator for a single reporting period. For a year-on-year comparison we therefore use our second central steering parameter for value management, the delta CVA, which is the difference between the CVAs of two consecutive periods. If the delta CVA is positive, the company has created more value than it did in the previous year.

The value-based indicators support management in its decision-making, especially in the areas of strategic portfolio optimization and the allocation of resources for acquisitions and capital expenditures. The focus at the operational level is on the key drivers of enterprise value: growth (sales), cost efficiency (EBITDA) and capital efficiency (working capital, capital expenditures), since these directly affect value creation.

CALCULATING THE COST OF CAPITAL

Bayer calculates the cost of capital according to the debt/equity ratio at the beginning of the year using the weighted average cost of capital (WACC) formula. The cost of equity capital is the return expected by stockholders, computed from capital market information. The cost of debt used in calculating WACC is based on the terms for ten-year Eurobonds issued by industrial companies with an "A–"rating.

Weighted average cost of capital for the Bayer Group
7.8 %

To take into account the different risk and return profiles of our principal businesses, we calculate individual capital cost factors after income taxes for each of our subgroups. In 2012 these were unchanged from 2011 at 8.1% for HealthCare, 7.5% for CropScience and 7.1% for MaterialScience. The minimum return required for the Group in 2012, as in 2011, was 7.8%.

GROSS CASH FLOW, CASH VALUE ADDED AND CASH FLOW RETURN ON INVESTMENT AS PERFORMANCE YARDSTICKS

The gross cash flow as published in our statement of cash flows is the measure of our internal financing capability. Bayer has chosen this parameter because it is relatively free of accounting influences and is therefore a more meaningful performance indicator.

Taking into account the costs of capital and of reproducing depletable assets, we determine the gross cash flow hurdle. If the gross cash flow hurdle is equaled or exceeded, the CVA is positive and thus the required return on equity and debt plus the cost of asset reproduction has been earned.

The profitability of the Group and of its individual business entities is measured by the cash flow return on investment (CFROI). In 2012 we changed the way the CFROI is calculated to allow a direct comparison to the weighted average cost of capital (WACC). The CFROI is now the difference between the gross cash flow and the cost of reproducing depletable assets, divided by the capital invested. The capital invested is calculated from the statement of financial position and basically comprises the property, plant and equipment and intangible assets required for operations – stated at cost of acquisition or construction – plus working capital, less interest-free liabilities (such as current provisions). To mitigate the effect of fluctuations in the capital invested during the year, the CFROI is computed on the basis of the average capital invested for the respective year.

The gross cash flow hurdle for 2012 was €4,337 million (2011: €4,339 million).

Positive CVA
=
value created

Actual gross cash flow came in at €4,599 million, exceeding the hurdle by 6.0%. This means we earned our entire capital and asset reproduction costs in 2012. The positive CVA of €262 million shows that Bayer exceeded the minimum return and reproduction requirements and created value for the company in addition. Since the CVA in 2011 was €833 million, the Bayer Group therefore recorded a delta CVA of minus €571 million in 2012. The CFROI for 2012 amounted to 8.3% (2011: 9.7%).

HealthCare and CropScience exceeded their target returns, including asset reproduction, and helped to increase the company's value. At MaterialScience, investment in new production facilities forms the basis for profitable growth in the future. These strategic capital expenditures are based on expected medium- and long-term market developments and continued to have an adverse effect on the value management data for MaterialScience.

Value Management Indicators by Subgroup [Table 3.18]

	HealthCare		CropScience		MaterialScience		Bayer Group	
	2011	2012	2011	2012	2011	2012	2011	2012
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Gross cash flow* (GCF)	3,254	2,614	900	1,320	939	947	5,172	4,599
Gross cash flow hurdle	2,205	2,214	857	824	1,033	1,079	4,339	4,337
Cash value added (CVA)	1,049	400	43	496	(94)	(132)	833	262
Delta cash value added (delta CVA)	392	(649)	378	453	(179)	(38)	446	(571)
Cash flow return on investment (CFROI)	12.7%	10.1%	8.2%	12.4%	6.0%	5.6%	9.7%	8.3%
WACC	8.1%	8.1%	7.5%	7.5%	7.1%	7.1%	7.8%	7.8%
Average capital invested	22,757	22,156	8,772	9,194	10,157	10,678	43,348	43,403

2011 figures restated

* For definition see Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."

7.5 Liquidity and Capital Expenditures of the Bayer Group

Bayer Group Summary Statements of Cash Flows [Table 3.19]

	2011	2012
	€ million	€ million
Gross cash flow*	**5,172**	**4,599**
Changes in working capital/other non-cash items	(112)	(67)
Net cash provided by (used in) operating activities (net cash flow)	**5,060**	**4,532**
Net cash provided by (used in) investing activities	**(3,890)**	**(818)**
Net cash provided by (used in) financing activities	**(2,213)**	**(3,782)**
Change in cash and cash equivalents due to business activities	**(1,043)**	**(68)**
Cash and cash equivalents at beginning of period	**2,840**	**1,770**
Change due to exchange rate movements and to changes in scope of consolidation	(27)	(7)
Cash and cash equivalents at end of period	**1,770**	**1,695**

* Gross cash flow = income after taxes, plus income taxes, plus financial result, minus income taxes paid or accrued, plus depreciation, amortization and impairment losses, minus impairment loss reversals, plus/minus changes in pension provisions, minus gains/plus losses on retirements of noncurrent assets, minus gains from the remeasurement of already held assets in step acquisitions. The change in pension provisions includes the elimination of non-cash components of EBIT. It also contains benefit payments during the year.

OPERATING CASH FLOW

Gross cash flow receded by 11.1% in 2012 to €4,599 million and net cash flow by 10.4% to €4,532 million, the increase in cash flows due to the improved operating performance being more than offset by a business-related increase in cash tied up in working capital and higher income tax payments (2012: €1,667 million; 2011: €932 million). In addition, the purchase of securities held for trading, which must be reflected under operating activities according to IAS 7, diminished net cash flow by €200 million.

INVESTING CASH FLOW

Net cash outflow for investing activities in 2012 totaled €818 million. Cash outflows for property, plant and equipment and intangible assets were 19.4% higher at €1,929 million. Of this amount, HealthCare accounted for €721 million (2011: €608 million), CropScience for €376 million (2011: €280 million) and MaterialScience for €620 million (2011: €565 million). Cash outflows for acquisitions, totaling €466 million (2011: €261 million), related to the acquisition of the U.S. biological crop protection company AgraQuest, Inc., the purchase of the watermelon and melon seed business of the U.S. company Abbott & Cobb, Inc. and the acquisition of the remaining 50% interest in Baulé S.A.S., France. Among the cash inflows in 2012 were €178 million (2011: €173 million) in income from divestitures – mainly the sale of the hematological oncology portfolio to Genzyme Corp., United States – and €104 million (2011: €75 million) in interest and dividends received. Cash inflows from current and noncurrent financial assets totaled €1,068 million (2011: €2,537 million outflows), mainly comprising proceeds from the sale of investments in money market funds.

The principal strategically relevant capital expenditures for property, plant and equipment in the operating segments of the Bayer Group in 2012 and 2011 are listed in the following table:

Capital Expenditures for Property, Plant and Equipment [Table 3.20]

Segment	Description
CAPITAL EXPENDITURES 2012	
Pharmaceuticals	Consolidation of a number of administrative and business operations in Whippany, New Jersey, U.S.A.
	Establishment of a pilot facility for the production of biomolecules for clinical trials in Wuppertal, Germany
	Production facilities for the formulation and packaging of hormonal solids in Weimar, Germany
	Expansion of Xarelto™ manufacturing capacities in Wuppertal and Leverkusen, Germany
Consumer Health	Expansion of production and packaging capacities for effervescents in Cimanggis, Indonesia
CropScience	Capacity expansion and process modifications for the production of fungicides in Germany and Switzerland
	Establishment of wheat breeding stations in Europe, North America and Australia
	Construction of a greenhouse in Research Triangle Park, North Carolina, U.S.A.
MaterialScience	Construction of a world-scale TDI production complex based on gas-phase phosgenation technology in Dormagen, Germany
	Construction of a multi-purpose facility for the aliphatic isocyanates HDI and IPDI in Leverkusen, Germany
	Completion of a polyurethanes systems house in Qingdao, China
CAPITAL EXPENDITURES 2011	
Pharmaceuticals	Establishment of a pilot facility for the production of biomolecules for clinical trials in Wuppertal, Germany
	Installation of packaging capacities for the YAZ™ product family in Berlin, Germany
	Production facilities for the formulation and packaging of hormonal solids in Weimar, Germany
	Capacity expansion for contrast agents in Bergkamen, Germany
	Expansion of production capacities for new Kogenate™ formulations in Berkeley, California, U.S.A.
Consumer Health	Expansion of production and packaging capacities for effervescents in Cimanggis, Indonesia
CropScience	Capacity expansions and process improvements for the production of fungicides in Dormagen, Germany, and Muttenz, Switzerland
	Expansion of research facilities in Haelen, Netherlands
	Construction of a greenhouse in Research Triangle Park, North Carolina, U.S.A.
MaterialScience	Completion of a world-scale TDI production complex in Shanghai, China
	Commissioning of an NaCl electrolyzer with an oxygen-depolarized cathode for demonstration purposes in Krefeld, Germany

FINANCING CASH FLOW

Net cash outflow for financing activities in 2012 amounted to €3,782 million, including net loan repayments of €1,945 million (2011: €397 million). Net interest payments were 17.9% lower at €468 million (2011: €570 million). The cash outflow for "dividend payments and withholding tax on dividends" amounted to €1,366 million (2011: €1,242 million).

LIQUID ASSETS AND NET FINANCIAL DEBT

Net Financial Debt [Table 3.21]

	Dec. 31, 2011	Sep. 30, 2012	Dec. 31, 2012
	€ million	€ million	€ million
Bonds and notes/promissory notes	7,710	5,632	5,528
of which hybrid bond	1,344	1,367	1,364
Liabilities to banks	2,657	2,827	2,841
Liabilities under finance leases	554	556	542
Liabilities from derivatives	513	355	304
Other financial liabilities	228	370	313
Positive fair values of hedges of recorded transactions	(395)	(350)	(456)
Financial debt	**11,267**	**9,390**	**9,072**
Cash and cash equivalents	(1,770)	(1,426)	(1,695)
Current financial assets	(2,484)	(1,159)	(349)
Net financial debt	**7,013**	**6,805**	**7,028**

Net financial debt of the Bayer Group as of December 31, 2012 was level with December 31, 2011, at €7.0 billion. Cash inflows from operating activities were offset by outflows for dividends, the allocations to pension funds, and acquisitions. As of December 31, 2012, the Group had cash and cash equivalents of €1.7 billion (2011: €1.8 billion). Financial liabilities at the end of the reporting period amounted to €9.1 billion (2011: €11.3 billion), with the subordinated hybrid bond issued in July 2005 reflected at €1.4 billion. Net financial debt should be viewed against the fact that Moody's and Standard & Poor's treat 75% and 50%, respectively, of the hybrid bond as equity. Unlike conventional borrowings, the hybrid bond thus only has a limited effect on the Group's rating-specific debt indicators. Our noncurrent financial liabilities declined in 2012 from €8.0 billion to €7.0 billion, while current financial liabilities declined from €3.7 billion to €2.6 billion.

7.6 Asset and Capital Structure of the Bayer Group

Bayer Group Summary Statements of Financial Position [Table 3.22]

	Dec. 31, 2011	Dec. 31, 2012	Change
	€ million	€ million	%
Noncurrent assets	**32,697**	**32,350**	**–1.1**
Current assets	**19,984**	**18,986**	**–5.0**
Assets held for sale	84	-	.
Total current assets	**20,068**	**18,986**	**–5.4**
Total assets	**52,765**	**51,336**	**–2.7**
Equity	**19,271**	**18,569**	**–3.6**
Noncurrent liabilities	**20,104**	**19,668**	**–2.2**
Current liabilities	**13,387**	**13,099**	**–2.2**
Provisions directly related to assets held for sale	3	-	.
Total current liabilities	**13,390**	**13,099**	**–2.2**
Liabilities	**33,494**	**32,767**	**–2.2**
Total equity and liabilities	**52,765**	**51,336**	**–2.7**

Total assets declined in 2012 by 2.7% to €51.3 billion. Noncurrent assets declined by €0.3 billion to €32.4 billion, mainly due to amortization and impairments of intangible assets. Noncurrent assets included goodwill of €9.3 billion (2011: €9.2 billion), the increase being mainly due to acquisitions, but were diminished by currency effects. Current assets declined by €1.0 billion compared with the previous year, to €19.0 billion, mainly because of the lower liquidity resulting from the redemption of several bonds at maturity. This was partially offset by the business-related growth in inventories and trade accounts receivable.

Equity was lower by €0.7 billion at €18.6 billion. The factors here included the €2.0 billion increase – recognized outside profit or loss – in post-employment benefit obligations and the dividend payment of €1.4 billion (2011: €1.2 billion), with the €2.4 billion net income having an offsetting effect. Our equity ratio (equity coverage of total assets) was 36.2% as of December 31, 2012 (2011: 36.5%).

Liabilities fell by €0.7 billion compared with December 31, 2011, to €32.8 billion, mainly due to the redemption of several bonds. This factor was partly offset by the increase in the net amount recognized for post-employment benefits and the allocations to provisions for legal claims.

Net Amount Recognized for Post-Employment Benefits [Table 3.23]

	Dec. 31, 2011	Dec. 31, 2012
	€ million	€ million
Provisions for pensions and other post-employment benefits	7,870	9,373
Benefit plan assets in excess of obligation	(72)	(27)
Net amount recognized for post-employment benefits	**7,798**	**9,346**

The net amount recognized for post-employment benefits increased from €7.8 billion to €9.3 billion in 2012, due especially to lower long-term capital market interest rates. This includes a €1.0 billion allocation made to our pension funds in 2012.

Ratios [Table 3.24]

		2011	2012
Cost of sales ratio (%)	Cost of goods sold / Sales	49.2	47.9
R&D expense ratio (%)	Research and development expenses / Sales	8.0	7.6
Return on sales in (%)	Income after taxes / Sales	6.8	6.3
EBIT margin (%)	EBIT / Sales	11.4	10.0
EBITDA margin before special items (%)	EBITDA before special items / Sales	20.8	20.8
Asset intensity (%)	Property, plant and equipment + intangible assets / Total assets	55.5	55.8
D&A/capex ratio (%)	Depreciation and amortization* / Capital expenditures*	151.3	129.9
Liability structure (%)	Current liabilities / Liabilities	40.0	40.0
Gearing	Net debt + pension provisions / Equity	0.8	0.9
Free operating cash flow (€ million)	Net operating cash flow less cash outflows for property, plant and equipment and intangible assets	3,445	2,603
Inventory turnover	Cost of goods sold / Inventories	2.8	2.7
Receivables turnover	Sales / Trade accounts receivable	5.2	5.4
Payables turnover	Cost of goods sold / Trade accounts payable	4.8	4.4
Equity ratio (%)	Equity / Total assets	36.5	36.2
Return on equity (%)	Income after taxes / Average equity	13.0	13.2
Return on assets (%)	Income before taxes and interest expense / Average total assets for the year	8.2	7.7

* property, plant and equipment + intangible assets

7.7 Financial Strategy

The financial management of the Bayer Group is conducted by the strategic management holding company Bayer AG. Capital is a global resource, generally procured centrally and distributed within the Group. The foremost objectives of our financial management are to help bring about a sustained increase in corporate value and to ensure the Group's liquidity and creditworthiness. This involves optimizing the capital structure and effectively managing risks. The management of currency, interest rate, raw material price and default risks helps to reduce the volatility of our earnings.

The contracted rating agencies assess Bayer as follows:

Rating [Table 3.25]

	Long-term rating	Outlook	Short-term rating
Standard & Poor's	A–	positive	A–2
Moody's	A3	stable	P–2

These credit ratings reflect the company's high solvency and ensure access to a broad investor base for financing purposes. It remains our goal to achieve and maintain financial ratios that support an A rating in order to maintain our financial flexibility. Accordingly, we plan to use part of our operating cash flows to reduce net financial debt.

We pursue a prudent debt management strategy to ensure flexibility, drawing on a balanced financing portfolio. Chief among these resources are a multi-currency European Medium Term Notes program, syndicated credit facilities, bilateral loan agreements and a global commercial paper program.

We use financial derivatives to hedge against risks arising from business operations or financial transactions, but do not employ contracts in the absence of an underlying transaction. It is our policy to diminish default risks by selecting trading partners with a high credit standing. We closely monitor the execution of all transactions, which are conducted in accordance with Group directives.

SEE CHAPTER 16.1

Further details of our risk management objectives and the ways in which we account for all the major types of hedged transactions – along with price, credit and liquidity risks as they relate to the use of financial instruments – are given in Chapter 16.1 "Opportunity and Risk Report."

8. Earnings; Asset and Financial Position of Bayer AG

Bayer AG is the parent corporation of the Bayer Group and functions as a management holding company. The principal management functions for the entire Group are performed by the Board of Management of Bayer AG. These include strategic planning, resource allocation, executive management and financial management. The performance of Bayer AG is largely determined by the business performance of the Bayer Group.

The financial statements of Bayer AG are prepared in accordance with the German Commercial Code (HGB) and Stock Corporation Act (AktG).

8.1 Earnings Performance of Bayer AG

Bayer AG Summary Income Statements according to the German Commercial Code [Table 3.26]

	2011	2012
	€ million	€ million
Income from investments in affiliated companies – net	2,138	1,719
Interest expense – net	(589)	(445)
Other financial income – net	116	89
Other operating income	101	87
General administration expenses	(195)	(228)
Other operating expenses	(111)	(106)
Income before income taxes	**1,460**	**1,116**
Income taxes	(335)	(227)
Net income	**1,125**	**889**
Withdrawal from other retained earnings	239	682
Distributable profit	**1,364**	**1,571**

In fiscal 2012 Bayer AG's net income declined 21% to €889 million (2011: €1,125 million), mainly because of lower income from investments in affiliated companies. However, reductions in net interest expense and income taxes had a positive effect.

The €419 million drop in income from affiliated companies to €1,719 million (–20%) was principally attributable to a decrease of about €400 million in income from subsidiaries with which Bayer AG has profit and loss transfer agreements. This item is also impacted by a one-time charge of €256 million in connection with the assumption by various subsidiaries of the pension fund's statutory obligation to raise pensions. In 2011, however, the income from Bayer Pharma AG had been diminished by a one-time charge of €268 million resulting from the transfer of pension obligations to Bayer Altersversorgung GmbH. The main reasons for the drop in income from subsidiaries with profit and loss transfer agreements were significantly lower income from Bayer MaterialScience AG and the absence of income from Bayer Animal Health GmbH following the termination of its profit and loss transfer agreement with Bayer AG in 2011. As in the previous year, Bayer Pharma AG contributed the largest share of income from subsidiaries with profit and loss transfer agreements, at €1,397 million compared with €1,170 million in 2011. The non-recurrence of the €268 million one-time charge taken in 2011 benefited this subsidiary's income for 2012. However, earnings were diminished by a provision of €102 million for impending losses on transactions with intra-Group customers. Bayer CropScience AG contributed €446 million to Bayer AG's income (2011: €551 million). This amount included provisions of about €72 million established for impending losses on transactions with other Group companies. A loss of €179 million was transferred from Bayer MaterialScience AG, compared with income of €95 million in the previous year. The €274 million drop in this subsidiary's income was mainly attributable to business operations. Other significant earnings contributions comprised €291 million from a subsidiary that receives foreign dividend income.

Net interest expense was €445 million (2011: €589 million), down by €144 million compared with 2011. The main reason for the improved net interest position was the drop in interest rates, with the decrease

Other financial income and expenses yielded a positive balance of €89 million (2011: €116 million). This mainly comprised income of €183 million (2011: €121 million) from the subgroups and service companies to cover pension expenses for retirees remaining with Bayer AG following the hive-down of the operating business. Most of the corresponding expense is reflected in net interest expense. Bayer AG's income was reduced by €56 million as the result of the assumption of an obligation to raise the pensions paid by the pension fund. A further charge of €33 million resulted from the translation of foreign currency receivables and payables and from currency derivatives.

The balance of miscellaneous operating income and expenses relating to Bayer AG's performance of its functions as a holding company was minus €19 million (2011: minus €10 million), while general administration expenses amounted to €228 million (2011: €195 million).

Pre-tax income decreased by €344 million to €1,116 million. Tax expense dropped from €335 million to €227 million. After deduction of taxes, net income was €889 million (2011: €1,125 million). Including a €682 million withdrawal from retained earnings, the distributable profit amounted to €1,571 million.

The Board of Management and Supervisory Board will propose to the Annual Stockholders' Meeting on April 26, 2013 that the distributable profit be used to pay a dividend of €1.90 per share (826,947,808 shares) on the capital stock of €2,117 million entitled to the dividend for 2012.

8.2 Asset and Financial Position of Bayer AG

Bayer AG Summary Statements of Financial Position according to the German Commercial Code [Table 3.27]

	Dec. 31, 2011	Dec. 31, 2012
	€ million	€ million
ASSETS		
Noncurrent assets		
Intangible assets, property, plant and equipment	25	22
Financial assets	35,006	34,310
	35,031	**34,332**
Current assets		
Receivables from subsidiaries	462	316
Remaining receivables, other assets	1,678	471
Cash and cash equivalents, marketable securities	1,199	903
	3,339	**1,690**
Total assets	**38,370**	**36,022**
EQUITY AND LIABILITIES		
Equity	**14,363**	**13,888**
Provisions	**3,418**	**2,719**
Other liabilities		
Bonds and notes, liabilities to banks	5,190	3,188
Payables to subsidiaries	15,043	15,874
Remaining liabilities	356	353
	20,589	**19,415**
Total equity and liabilities	**38,370**	**36,022**

The asset and liability structure of Bayer AG is dominated by its role as a holding company in managing the subsidiaries and financing corporate activities. This is primarily reflected in the high level of investments in affiliated companies and of receivables from, and payables to, Group companies.

Total assets of Bayer AG were €36.0 billion (2011: €38.4 billion), which was €2.4 billion less than at the start of the year. Current assets declined by €1.7 billion while noncurrent assets shrank by €0.7 billion.

Property, plant and equipment and intangible assets totaled €22 million and were therefore of secondary importance in relation to total assets. Financial assets declined by €0.7 billion from the previous year to €34.3 billion, principally as a result of the transfer of subsidiaries to other Group companies. This amount includes investments in affiliated companies of €33.5 billion (2011: €34.3 billion), accounting for 93.0% (2011: €89.3%) of total assets.

Receivables from subsidiaries amounted to €0.3 billion (2011: €0.5 billion) while payables to subsidiaries totaled €15.9 billion (2011: €15.0 billion). These amounts accounted for 0.9% of total assets and 44.0% of total equity and liabilities, respectively.

Receivables from medium-term investments with banks, which are reflected in other receivables, declined by €1.3 billion, as they were used to redeem a bond.

Equity showed a slight decline of €475 million because the dividend payment of €1,364 million for 2011 was not fully covered by the net income of €889 million in 2012. Equity totaled €13.9 billion at the end of 2012 (2011: €14.4 billion). Despite the decline, the equity ratio rose slightly from 37.4% to 38.6% because of the drop in total assets.

Provisions declined by €0.7 billion to €2.7 billion. Of the decrease, €0.5 billion of the decline related to provisions for pensions and other post-employment benefits. One of the factors here was the transfer of additional funds to Bayer Pension Trust to cover pension obligations. This reduced the net liability after deducting plan assets. Tax payments made reduced tax provisions by €108 million. There was also a fall in other provisions, mainly because of lower currency translation risks.

Other liabilities decreased by €1.2 billion, mainly due to a reduction in financial debt, and amounted to €19.4 billion (net of deductible receivables; 2011: €20.6 billion). The €1.5 billion reduction in financial debt to €20.8 billion (2011: €22.3 billion) was largely attributable to the redemption of a €2.0 billion bond at maturity. Intra-Group debt increased by €0.5 billion. Net debt was lower than in the previous year at €19.9 billion (2011: €21.1 billion).

9. Procurement and Production

In 2012, purchase orders for goods and services worth a total of approximately €18.1 billion from some 101,000 suppliers in 125 countries were recorded in the central ordering system. To meet specific requirements as fully as possible, each subgroup procures direct materials itself. Indirect goods and services not relevant for production, however, are sourced by our service companies or the unit with the largest requirements using center-led strategies.

We endeavor to act responsibly along the entire supply chain, and sustainability considerations are integrated into our procurement processes throughout the Group. These include sourcing criteria such as regulatory compliance, supply assurance, risk management, quality adherence and cost reduction. The Bayer Supplier Code of Conduct, which sets out our sustainability requirements and is aligned to the principles of the UN Global Compact, forms the basis for our work with suppliers. This code of conduct is an established part of our supplier selection and evaluation process and is contractually integrated into ordering systems and agreements throughout the Group. We verify our suppliers' adherence to the code of conduct by way of supplier evaluations and audits. In 2012 we carried out web-based supplier evaluations and external audits. In addition, Bayer auditors performed supplier audits focused on HSE (health, safety, environment) aspects. The results are analyzed in detail and documented. In the event of any shortcomings, action plans are developed in conjunction with the suppliers concerned to improve their social and/or environmental standards.

HEALTHCARE

Benefits from the production network

The Product Supply unit of HealthCare steers the subgroup's entire supply chain, from raw material procurement to manufacturing to product shipment, utilizing a global production network consisting of its own sites and those of subcontractors. In this way we aim to steadily reduce costs, increase our flexibility and delivery reliability, and meet the globally high demands in terms of quality, health, safety and environmental protection. The manufacture of pharmaceutical products is subject to extraordinarily stringent quality standards. These standards are known collectively as "Good Manufacturing Practices" (GMP). Compliance with these requirements is regularly audited by internal experts, regulatory authorities and external consultants.

The Pharmaceuticals segment generally procures the starting materials for the active ingredients of its prescription pharmaceuticals from external suppliers. To prevent supply bottlenecks and mitigate major price fluctuations, these starting materials and the intermediates we do not produce ourselves are generally purchased under global contracts and/or from a number of suppliers we have audited and approved.

Our active ingredients for prescription medicines are manufactured primarily at the sites in Wuppertal and Bergkamen, Germany, and Berkeley and Emeryville, California, United States. These substances are processed into finished products and packaged worldwide. Our medicines come in a wide range of delivery forms including solids such as tablets, coated tablets or powders; semi-solids such as ointments or creams; and liquid pharmaceuticals such as those used in injections or infusions. Our hormonal contraceptives are supplied as sugar- or film-coated tablets or used in intrauterine systems (coils), for example. These formulating and packaging activities take place in Berlin, Leverkusen and Weimar, Germany; Garbagnate, Italy; Beijing, China; São Paulo, Brazil; and Turku, Finland. The hemophilia drug Kogenate™ is manufactured by a biotechnological process at Berkeley, California, United States. Betaferon™/Betaseron™ for the treatment of multiple sclerosis is produced in Emeryville, California.

For the Consumer Care Division of the Consumer Health segment we produce certain active substances, such as acetylsalicylic acid and clotrimazole, within the Bayer Group in La Felguera, Spain. The principal raw materials we purchase from third parties are naproxen, citric acid, ascorbic acid and other vitamins, and paracetamol. To minimize business risks, we diversify our raw material procurement sources worldwide and conclude long-term supply agreements. Among the division's production sites are the facilities in Myerstown, Pennsylvania, United States; Cimanggis, Indonesia; Lerma, Mexico; Bitterfeld-Wolfen and Grenzach-Wyhlen, Germany; and Madrid, Spain.

The Diabetes Care products (such as blood glucose meters) of our Medical Care division are mainly procured from original equipment manufacturers (OEMs). Material prices and availability are covered in most cases by long-term contracts and therefore are not subject to major fluctuations. We hold strategic reserves of certain materials and finished products so that we can supply our customers consistently and reliably. Our contrast agents for diagnostic imaging procedures are produced mainly in Berlin, Germany. Medical devices such as contrast agent injectors and mechanical systems for treating constricted or blocked blood vessels are manufactured at the U.S. sites near Pittsburgh, Pennsylvania, and at Coon Rapids, Minnesota. Most of the materials and components needed to manufacture our medical devices are procured from external suppliers. The availability, quality and price stability of the materials are ensured by way of long-term agreements, careful choice of suppliers and active supplier management.

The Animal Health Division procures the pharmaceutical active ingredients for its veterinary medicines both from within the Bayer Group and from external suppliers throughout the world. Our animal health products are manufactured mainly at the sites in Kiel, Germany, and Shawnee, Kansas, United States, and marketed worldwide.

CROPSCIENCE

CropScience, too, manages procurement and production as a single organizational unit. This enables an integrated supply chain from raw material purchase through end-product manufacture to warehousing, followed by a two- or three-step distribution system depending on local market conditions. Unitary management is also intended to help us steadily improve our cost structures, increase our flexibility, ensure a swifter response to market volatility and meet our high quality and safety standards.

Global procurement and production network for agrochemical products and seeds at CropScience

In line with our strategy and in support of the volume growth in our business, we further optimized our procurement structures in 2012. The principal procurement countries, representing the bulk of our procurement volume, are now centrally managed. With this realigned organizational structure, we aim to operate more efficiently in procurement markets and optimize our cost position. In addition, we mainly procure supplies of important raw materials on the basis of long-term supply agreements to minimize procurement risks such as supply shortages or substantial price fluctuations. Regular sustainability and quality audits of our suppliers ensure compliance with internal and external standards.

Crop Protection and Environmental Science products are mainly manufactured at our own production sites and formulating facilities. Among the largest are the facilities in Dormagen, Knapsack and Frankfurt am Main, Germany; Kansas City, Missouri, United States; and Vapi, India. Our network of decentralized formulation and filling sites enables us to respond rapidly to local market needs. At these sites the active ingredients are processed into herbicides, fungicides, insecticides, seed treatment products and Environmental Science products according to local requirements and application areas. Packaging of the products also takes place in these facilities.

Production in the Seeds business unit takes place at locations close to our customers in Europe, Asia, and North and South America at our own farms or under contract.

Investment in our global production network is continuing in order to create capacities for new products and technologies and to improve manufacturing processes. We are significantly increasing our overall level of capital investment to meet the steadily rising demand in a competitive and timely manner, and plan to invest some €2 billion between 2011 and 2016. We had already made capital expenditures of about €500 million by the end of 2012.

MATERIALSCIENCE

Procurement in the MaterialScience subgroup is globally steered by the Procurement & Trading unit. Worldwide procurement and trading processes are centrally managed to leverage synergies within MaterialScience. We aim to procure raw materials, energies and services in the market on the best possible terms by optimizing procurement structures and processes.

Key raw materials for our MaterialScience products are petrochemical feedstocks such as benzene, toluene and phenol. We purchase these materials on the procurement markets, mainly under long-term contracts. The operation of our production facilities also requires large amounts of energy, mostly in the form of electricity or steam. In steam and electricity generation, we aim for a balanced diversification of fuels and a mix of external procurement and captive production to minimize the price fluctuation risk.

The principal production facilities of MaterialScience are at Dormagen, Krefeld and Leverkusen, Germany; Shanghai, China; and Baytown, Texas, United States. These supply all the subgroup's business units and are centrally managed by the Industrial Operations unit. Further major production sites are located at Antwerp, Belgium; Brunsbüttel, Germany; Map Ta Phut, Thailand; and Tarragona, Spain. Each of these sites is managed by the respective business unit.

World-scale facilities reduce costs for commodities

In the field of commodities we endeavor to reduce costs by operating high-capacity production facilities that enable us to supply our markets on an international basis. We maintain a relatively large number of production facilities in selected countries to serve our differentiated businesses. These facilities include the "systems houses," where we formulate and supply customized polyurethane systems, and plants where we compound polycarbonate granules to meet specific customer requirements or manufacture semi-finished products (polycarbonate sheets). We also operate regional production facilities for functional films made of polycarbonate or thermoplastic polyurethane.

10. Products, Distribution and Markets

Marketing activities within the Bayer Group are decentralized due to the diversified business portfolio.

HEALTHCARE

Broad product portfolio in the Pharmaceuticals segment

Our Pharmaceuticals segment supplies prescription products. We offer cardiology drugs such as the anticoagulant Xarelto™ (rivaroxaban), Aspirin™ Cardio to protect against heart attacks, and Adalat™ to treat high blood pressure and coronary heart disease. The portfolio also includes women's healthcare products such as our YAZ™/Yasmin™/Yasminelle™ and Mirena™ contraceptives, and hormone replacement therapies such as Angeliq™. We also offer specialty pharmaceuticals, which are mainly prescribed by specialist physicians, including Betaferon™/Betaseron™ for multiple sclerosis, Kogenate™ to treat people with hemophilia A, and Nexavar™ for treatment of certain types of cancer. Among the most important new launches are the cancer drug regorafenib (approved in the U.S. under the tradename Stivarga™) and Eylea™ (aflibercept) to treat wet age-related macular degeneration. Our pharmaceutical products are primarily distributed through wholesalers, pharmacies and hospitals. Co-promotion and co-marketing agreements serve to optimize our distribution network. For example, the agreement with Johnson & Johnson subsidiaries Janssen Research & Development, LLC and Janssen Pharmaceuticals on the continuing joint development and marketing of the anticoagulant Xarelto™ ensures targeted development and confers regional marketing rights that enable the partners to share in the product's expected success.

Consumer Health segment: focus on non-prescription products

Our Consumer Health segment chiefly markets non-prescription products. The Consumer Care Division specializes in over-the-counter (OTC) medicines – those available without a prescription – and is among the leading suppliers in the OTC market with a portfolio covering all the major therapeutic areas. Our offering includes the pain relievers Aspirin™ and Aleve™/naproxen and the medicinal skincare products Bepanthen™/Bepanthol™ and Canesten™. The product range also includes nutritionals such as One A Day™, Supradyn™, Berocca™ and Redoxon™, antacids such as Talcid™, and cough-and-cold products such as Alka-Seltzer Plus™ and White & Black™. We also offer prescription dermatology

products. The division's sales and distribution channels are generally pharmacies, with supermarket chains and other large retailers also playing a significant role in certain important markets such as the United States.

In the Medical Care Division we offer blood glucose monitoring devices such as the single-strip Contour™ system and the multi-strip Breeze™ system. We also market the Contour™ USB meter, which features integrated diabetes management software and direct plug-in to computers, and the A1CNow™ system for determining long-term blood glucose control (A1c). Outside Europe, these products are generally sold to consumers through pharmacies, drugstores, mass merchants, hospitals or wholesalers. In Europe, they are sold mainly through pharmacies. We are among the principal players in the market for blood glucose meters. We also are the world's leading supplier of contrast agent injection systems for diagnostic and therapeutic medical procedures in X-ray, computed tomography and magnetic resonance imaging, and of mechanical systems for removing thrombi from blood vessels. We offer service products for these systems in addition. Examples from our portfolio of contrast agents for diagnostic imaging are Ultravist™, Gadovist™/Gadavist™ and Magnevist™. Our products are marketed to cardiologists, radiologists and vascular surgeons in hospitals and out-patient clinical sites through a global direct sales organization, supplemented in some cases by local distributors.

The Animal Health Division offers veterinary pharmaceuticals and grooming products for livestock and companion animals. The top-selling product line comprises Advantix™ and Advantage™ for the prevention and treatment of flea infestation in dogs and cats. Other important products include Baytril™ for the control of infectious diseases, Drontal™ and Drontal™ Plus wormers, and Baycox™ to treat coccidiosis in livestock. We occupy leading positions in individual countries and product segments, and are the world's fifth-largest animal health company in terms of sales. Depending on local regulatory frameworks, animal health products may be available to end users on a veterinarian's prescription or prescription-free from veterinarians, pharmacies or retail stores.

CROPSCIENCE

CropScience offers a comprehensive range of products and services in the areas of seed breeding, crop protection, plant traits and non-agricultural pest and weed control. These are commercialized according to local market conditions. Our business is subject to the growing seasons for the relevant crops and the resulting sales cycles.

Integrated product portfolio at CropScience

CropScience markets its products in more than 120 countries worldwide. In the coming years we intend to continue expanding our business, particularly in the emerging markets, by deploying innovative, leading-edge technologies in order to meet the increasing global demand for high-quality food and feed.

The Crop Protection business is based on a broad portfolio of highly effective herbicides, fungicides, insecticides and seed treatment products. Thanks to our innovation capability and many years of experience with crop protection products, we are among the global leaders in this market. CropScience is the world market leader in insecticides, holds second place globally in fungicides and occupies third position in the world market for weed control products (herbicides), including plant growth regulators. The SeedGrowth business unit focuses on the use of crop protection active ingredients specially developed for the protection of seeds and seedlings. With our insecticides, fungicides and combination products, we are among the leading suppliers of seed treatment products in terms of sales. Our Crop Protection products are marketed through a two- or three-step distribution system, either via wholesalers or directly to retailers.

The activities of the Seeds unit are focused on our core crops of oilseed rape/canola, cotton, rice and vegetables. We market high-value seeds based on our own research and breeding expertise. In these core crops we have achieved strong market positions and are globally represented. We have also been marketing soybean seeds in the United States since 2011. Our most important markets are North America for canola seed; North and Latin America, India and southern Europe for cotton seed; and Asia for hybrid rice seed. Our vegetable seed varieties are sold in more than 100 countries throughout the world to growers, breeders, specialist retailers and the processing industry. Characteristics ("traits") developed using modern breeding methods are either incorporated into our own seed varieties or licensed to other seed companies.

The products of our Environmental Science business unit are based on both proprietary and inlicensed active ingredients and are specially designed for non-agricultural uses. This unit markets plant care products and home and garden brands for consumers along with solutions for professional users in the green industry and the pest and vector control sector. In terms of sales, CropScience is among the world's leading suppliers of non-agricultural pest control products. The Environmental Science products are marketed through various distribution channels. Our home and garden products are sold to consumers via both wholesalers and specialist retailers. Products for professional users are sold via wholesalers. Much of our business in the vector control field is transacted in response to tendering by government agencies and non-governmental organizations.

MATERIALSCIENCE

MaterialScience: one of the world's largest polymer companies

One of the world's largest polymer companies, MaterialScience is a leading manufacturer and supplier of precursors for rigid and flexible foams, plastic granules, and raw materials for coatings and adhesives. The subgroup holds leading competitive positions in these product groups in all regional markets. We also manufacture and market plastics sheets and functional films as well as selected inorganic basic chemicals such as chlorine, sodium hydroxide solution, hydrogen, hydrochloric acid and nitric acid. Some of these chemicals – such as chlorine – serve as raw materials for the manufacture of our products. Others – such as sodium hydroxide solution – are generated as byproducts of our production and sold to external customers.

Our products are used mainly in the automotive, construction, electrical/electronics, furniture, wood, textile, sports and leisure goods, medical equipment and chemical industries.

Rigid or flexible polyurethane foams based on our diphenylmethane diisocyanate (MDI), toluene diisocyanate (TDI) or polyether (PET) raw materials have found a broad range of applications in a variety of industries. Examples of their uses include car seats, automotive components such as bumpers or dashboards, insulating materials for the construction and refrigeration sectors, rigid housing components, mattresses, upholstered furniture and shoe soles.

Our polycarbonates, which we market under the Makrolon™, Bayblend™, Makroblend™ and other trademarks, are used in housings for electrical appliances, CDs/DVDs and car headlamps, among other applications.

The Coatings, Adhesives, Specialties business unit manufactures raw materials for automotive and commercial vehicle coatings or footwear adhesives, for example. Specialties include films used in vehicles or computer housings, along with raw materials for cosmetic and medical products.

We market our products mostly through regional and local distribution channels, making increasing use of e-commerce platforms for order processing. We also work with trading houses and local distributors who are responsible for business with small customers. Major customers with global operations are serviced directly by our key account managers.

11. Research, Development, Innovation

€3.0 billion Research and development expenses

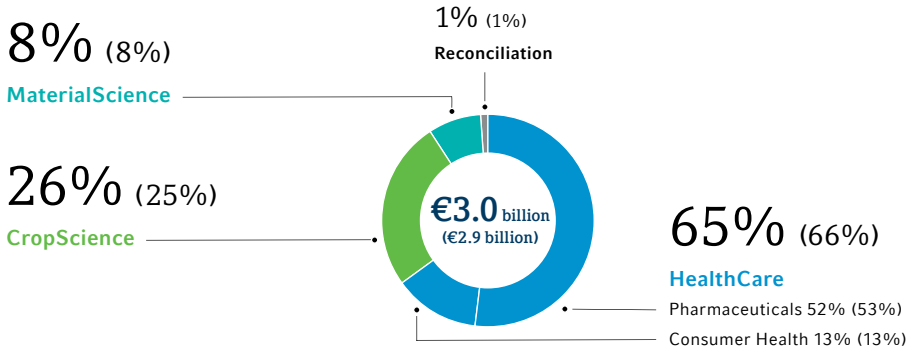
- **€2.0 billion** at HealthCare
- **€0.8 billion** at CropScience
- **€0.2 billion** at MaterialScience

Innovation is the key driver of Bayer's future growth. That is why Bayer focuses on research and development. In 2012 a total of €3,013 million (2011: €2,932 million) was spent on research and development. This was equivalent to 7.6% (2011: 8.0%) of sales. The number of employees working in research and development worldwide was 12,900.

The importance of global networking and collaboration – both among the units of our enterprise and with external companies and organizations – is steadily increasing. Our life-science areas of HealthCare and CropScience therefore work particularly closely together. We expect common research projects and the joint use of technology platforms to stimulate innovations for the improvement of human, animal and plant health. In addition, research projects with external partners from science and industry form a key component of our innovation strategy. These collaborations and alliances with leading universities, public research institutions and partner companies are supplemented by crowdsourcing, incubators like the CoLaborator™ in the United States, and science hubs in emerging regions such as Asia to tap into external innovative potential using the **open innovation** approach.

With strong and efficient research and development, an international network of partners and our focus on growth areas and markets, we are laying the foundations for Bayer's future success. Our activities are centered on our customers' needs – true to our mission "Bayer: Science For A Better Life."

Research and Development Expenses 2012 [Graphic 3.18]



2011 figures in parentheses

HEALTHCARE

In 2012 we invested €1,962 million (2011: €1,948 million) in research and development in the Pharmaceuticals and Consumer Health segments. This amounted to 65.1% of the Bayer Group's entire research and development spending and was equivalent to 10.5% (2011: 11.3%) of HealthCare sales. At the end of 2012, some 7,500 employees of the HealthCare subgroup were working in research and development.

Research and development expenses in the **Pharmaceuticals** segment amounted to €1,566 million (2011: €1,556 million), or 14.5% (2011: 15.6%) of segment sales. Our research and development outlay underscores our focus on growth through innovation. Drug discovery in the Pharmaceuticals segment is concentrated in the areas of cardiology and oncology, along with gynecological treatments and hematology. Other areas of focus are the therapeutic areas of inflammation and ophthalmology. In addition, we are strengthening our established products through life-cycle management, an example being the development of innovative forms of administration for contraceptives.

Research activities and capacities are bundled in Germany at the sites in Berlin and Wuppertal, and in the United States in the Mission Bay neighborhood of San Francisco and at Berkeley, California. Work in Berlin and Wuppertal mainly focuses on the discovery, optimization and development of new active substances. Research is also carried out at these sites in the fields of drug metabolism, pharmacokinetics, toxicology and clinical pharmacology. Our research and development activities in Mission Bay and Berkeley are concentrated on biologicals and hematology. We also operate an innovation center in Beijing, China.

We conducted clinical studies with several drug candidates from our research and development pipeline during 2012 to drive the development of new substances to treat diseases with a high unmet medical need. Following the completion of the required studies with a number of these drug candidates, we submitted applications to one or more regulatory agencies for approvals or approval extensions.

Four active ingredients/products have blockbuster potential. Of special importance is our anticoagulant Xarelto™ (rivaroxaban), which continues to be launched in more countries. In 2012 we filed for, and in some cases already received, marketing authorization in additional indications. In the area of oncology, regorafenib (registered in the United States under the trademark Stivarga™) is approved for the treatment of advanced colorectal cancer in some countries, and approval is pending in others. At the end of 2012, we filed for marketing authorization for radium-223 dichloride (Alpharadin) for the therapy of bone metastases in prostate cancer patients. Other promising products being launched include Eylea™ (aflibercept) for the treatment of wet age-related macular degeneration.

The most important drug candidates currently in the registration process are:

Products Submitted for Approval [Table 3.28]

	Indication
Aflibercept	E.U., Japan; treatment following central retinal vein occlusion
FC-Patch Low	E.U.; contraceptive patch
Octocog alfa* (recombinant Factor VIII)	U.S.A.; prophylaxis of hemophilia A in adults
Radium-223 dichloride	E.U., U.S.A.; treatment of hormone-refractory prostate cancer patients with bone metastases
Regorafenib	E.U., Japan; treatment of colorectal cancer
Regorafenib	U.S.A., Japan; treatment of metastatic and/or unresectable gastrointestinal stromal tumors
Riociguat	E.U., U.S.A.; treatment of pulmonary hypertension (CTEPH)
Riociguat	E.U., U.S.A.; treatment of pulmonary hypertension (PAH)
Rivaroxaban	E.U., U.S.A.; secondary prophylaxis of acute coronary syndrome
YAZ™ Flex Plus	U.S.A.; oral contraception with flexible dosage regimen and folic acid supplementation

* octocog alfa = active ingredient of Kogenate™

The following table shows our most important drug candidates currently in Phase II or III of clinical testing:

Research and Development Projects (Phases II and III)* [Table 3.29]

	Indication	Status
Aflibercept	Treatment of diabetic macular edema	Phase III
Aflibercept	Prevention of abnormal retinal angiogenesis following pathological myopia	Phase III
BAY 86-6150 (rFVIIa mutein)	Treatment of hemophilia A	Phase II/III
BAY 94-9027 (rFVIII mutein)	Treatment of hemophilia A	Phase III
Ciprofloxacin Inhale	Treatment of pulmonary infection	Phase III
LCS-16 (ULD LNG Contraceptive System)	Intrauterine contraception, duration of use: up to 5 years	Phase III
Prasterone**	Treatment of vulvovaginal atrophy	Phase III
Rivaroxaban	Prevention of major adverse cardiac events (MACE)	Phase III
Sodium deoxycholate***	Injection for reduction of submental fat	Phase III
Sorafenib	Treatment of breast cancer	Phase III
Sorafenib	Treatment of liver cancer, adjuvant therapy	Phase III
Sorafenib	Treatment of kidney cancer, adjuvant therapy	Phase III
Sorafenib	Treatment of thyroid cancer	Phase III
Tedizolid	Treatment of complicated skin and lung infections	Phase III
Amikacin Inhale	Treatment of lung infections	Phase II
BAY 80-6946 (PI3k inhibitor)	Treatment of recurrent/resistant non-Hodgkin's lymphoma	Phase II
BAY 94-8862 (MR antagonist)	Chronic heart failure	Phase II
Radium-223 dichloride	Treatment of bone metastases in cancer	Phase II
Refametinib (MEK inhibitor)	Cancer therapy	Phase II
Regorafenib	Cancer therapy	Phase II
Riociguat	Pulmonary hypertension	Phase II
Sorafenib	Cancer therapy	Phase II

* as of February 11, 2013

** prasterone = Vaginorm

*** sodium deoxycholate = ATX-101

The nature of drug discovery and development is such that not all compounds can be expected to meet the pre-defined project goals. It is possible that any or all of the projects listed above may have to be discontinued due to scientific and/or commercial reasons and will not result in commercialized products. It is also possible that the requisite Food and Drug Administration (FDA), European Medicines Agency (EMA) or other regulatory approvals will not be granted for these compounds.

We regularly evaluate our research and development pipeline in order to prioritize the most promising pharmaceutical projects.

Xarelto™ (active ingredient: rivaroxaban) has been used since 2008 for prophylaxis of venous thromboembolism (VTE) in adult patients following elective hip or knee replacement surgery. Xarelto™ is registered in more than 120 countries around the world and marketed in this indication by HealthCare outside the United States. In 2011, Xarelto™ was also approved in the European Union for stroke prevention in patients with atrial fibrillation as well as for the treatment of deep vein thrombosis (DVT) and the prevention of recurring DVT and pulmonary embolism following acute DVT in adult patients. In Japan, Xarelto™ was approved in January 2012 for prophylaxis of stroke and systemic embolism in patients with non-valvular atrial fibrillation. Market introduction began in April 2012.

In the United States, where Xarelto™ has been approved since 2011 for VTE prevention in adult patients following elective hip or knee joint replacement surgery and to reduce the risk of stroke in patients with non-valvular atrial fibrillation, Janssen Pharmaceuticals, Inc., United States – a subsidiary of Johnson & Johnson – holds the commercialization rights for Xarelto™. Bayer HealthCare supports the sales team of Janssen Pharmaceuticals, Inc. in selected hospitals and specialty markets in the United States.

Xarelto™ approved in further indications

Based on the successful EINSTEIN-PE study, we submitted an application to the European Medicines Agency (EMA) in April 2012 for marketing authorization of Xarelto™ in the treatment of pulmonary embolism and the secondary prevention of recurrent deep vein thrombosis and pulmonary embolism. We were granted marketing authorization in November 2012. In May 2012, our cooperation partner Janssen Research & Development, LLC, United States, submitted applications to the U.S. Food and Drug Administration (FDA) seeking approval for Xarelto™ in the treatment of deep vein thrombosis or pulmonary embolism and in secondary prevention of recurrent venous thromboembolism (VTE). In November 2012, the FDA granted marketing authority for these applications following a priority review.

In December 2011, we submitted an application to the EMA for marketing authorization for Xarelto™ (rivaroxaban) in secondary prevention following acute coronary syndrome (ACS). The application for marketing approval in this indication in the U.S. was submitted to the FDA by our cooperation partner Janssen Research & Development, LLC. In June 2012, we received a Complete Response Letter from the FDA regarding the ACS indication. The requested information was submitted in September 2012 by our cooperation partner Janssen Research & Development, LLC. The application for Xarelto™ in the prevention of stent thrombosis in patients with acute coronary syndrome was submitted at the same time. The European application for marketing authorization for secondary prevention after acute coronary syndrome also includes prevention of stent thrombosis.

Riociguat is the first member of a new class of vasodilating agents known as soluble guanylate cyclase (sGC) stimulators. Administered in tablet form, riociguat is currently being investigated as a new approach for the treatment of various forms of pulmonary hypertension. The registration-relevant Phase III CHEST-1 and PATENT-1 studies each reached their primary endpoints in October 2012. In both studies, the substance demonstrated a statistically significant improvement in physical fitness among patients with chronic thromboembolic pulmonary hypertension (CTEPH) or pulmonary arterial hypertension (PAH) compared with placebo. Based on these studies, we submitted riociguat in February 2013 for marketing approval in the United States and the European Union for the treatment of CTEPH and PAH.

Regorafenib is a novel, oral multi-kinase inhibitor that inhibits various signaling pathways responsible for tumor growth. In 2012, we submitted regorafenib for marketing authorization in the treatment of patients with metastatic colorectal cancer (mCRC) in the United States, Europe and Japan. The registration applications are based on the results of the worldwide Phase III CORRECT study. In September 2012, regorafenib was approved in this indication by the U.S. FDA under the trade name Stivarga™. The Japanese Ministry of Health, Labour and Welfare (MHLW) granted priority review status for this substance.

In April 2012, regorafenib reached the primary endpoint – statistically significant extension of progression-free survival – in the Phase III GRID clinical trial. The GRID trial investigated regorafenib in the treatment of patients with metastatic and/or unresectable gastrointestinal stromal tumors (GIST) whose disease had progressed despite prior treatment with imatinib and sunitinib. In August 2012, the substance was submitted for approval in the treatment of GIST in the United States. In October 2012, the U.S. Food and Drug Administration (FDA) granted priority review status to the application. In December 2012, an application for registration was filed with the Japanese MHLW.

In 2011, we signed an agreement with Onyx Pharmaceuticals, Inc., United States, under which Onyx will receive a royalty on any future global sales of regorafenib in oncology.

In a registration-relevant Phase III study (ALSYMPCA), **radium-223 dichloride** (Alpharadin) – the cancer drug we are jointly developing with Algeta ASA, Norway – demonstrated a significant improvement in overall survival in patients with hormone-refractory prostate cancer (CRPC) and bone metastases. Based on these positive results, we filed registration applications with the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA) for radium-223 dichloride for the treatment of CRPC in December 2012.

Eylea™ (active ingredient: aflibercept) is our joint developmental project with Regeneron Pharmaceuticals, Inc., United States. Aflibercept blocks the natural growth factor VEGF (vascular endothelial growth factor), thus preventing the abnormal formation of new blood vessels that tend to leak blood. The medication is administered directly into the eye. Regeneron Pharmaceuticals holds exclusive rights in the United States, where Eylea™ has been approved since 2011 for the treatment of wet age-related macular degeneration (AMD). Bayer will market the product outside the United States. In 2012, Eylea™ was approved in various countries, including Japan, Australia and certain Latin American countries, for the treatment of wet AMD. In November 2012, the European Commission granted marketing authorization. The market introduction of Eylea™ in Australia, Japan and Europe began in November 2012.

In September 2012, based on the successful Phase III COPERNICUS and GALILEO studies, our cooperation partner Regeneron received an approval extension for Eylea™ in the United States for the treatment of macular edema following central retinal vein occlusion (CRVO). In December 2012, we filed with the European Medicines Agency (EMA) for marketing authorization in this indication. In January 2013, a registration application was filed with the Japanese MHLW.

In addition to the wet AMD indication, further Phase III studies are currently ongoing with aflibercept for the treatment of diabetic macular edema (DME) and choroidal neovascularization (mCNV) caused by severe myopia.

Our cooperation partner Genzyme Corp., United States, has applied for marketing authorization for the humanized monoclonal antibody **alemtuzumab** under the trade name Lemtrada™ for the treatment of multiple sclerosis. The relevant approval submissions were made in the European Union and the United States in the second quarter of 2012. We will share in the future success of Lemtrada™ through possible royalty payments, milestone payments and global co-promotion.

In July 2012, we launched an international Phase III trial to evaluate the investigational compound BAY 94-9027 for the treatment of hemophilia A. The PROTECT VIII trial is designed to investigate whether the recombinant coagulation factor VIII (rFVIII) **BAY94-9027** can prolong the duration of protection from bleeding when used prophylactically, while also having the ability to treat acute bleeding events. This could mean less frequent infusions for patients.

In the area of women's healthcare, we are conducting research into gynecological therapies and additional contraception options. **FC-Patch Low (ethinylestradiol/gestodene)** is intended to become the only transparent product of its kind and the smallest, lowest-dosed contraceptive patch on the market. In September 2012, we applied for marketing authorization for this product in the European Union. In December 2012, the European registration process for our new, low-dose hormone-releasing intrauterine device LCS-12 was successfully concluded. This device is smaller than Mirena™ and has a duration of

use of up to three years. We plan to market this new contraceptive coil in the European Union under the brand name "Jaydess." In January 2013, LCS-12 received approval in the United States under the trademark **Skyla™**. A further, also small hormone-releasing device **(LCS-16)**, with a duration of use of up to five years, is currently in Phase III clinical development. In October 2012, the European Commission authorized the approval of our new low-dose combined oral contraceptive **Flexyess™ (drospirenone/ethinylestradiol)**. The flexible extended regimen enables users to choose the number and timing of their periods according to their needs. First launches of the product are expected in the second half of 2013.

Life-cycle management for products already on the market

We also invest in continuous life-cycle management to identify possible additional indications and improved delivery forms for products already on the market. For example, the additional indication for our oral contraceptive **Qlaira™/Natazia™** – treatment of heavy and/or prolonged menstrual bleeding not caused by any diagnosed conditions of the uterus – was approved in the United States in March 2012.

Another example is our cancer drug **Nexavar™** (active ingredient: sorafenib), which we are continuing to develop jointly with Onyx Pharmaceuticals, Inc., United States. The successful active substance sorafenib, which attacks both cancer cells and the vascular system of the tumor, has been registered for the treatment of advanced renal cell carcinoma since 2005 and for hepatocellular carcinoma since 2007. We plan to develop the product beyond these two therapeutic areas with a broadly based life-cycle management program. In January 2013, a Phase III clinical trial investigating sorafenib as a monotherapy in patients with locally advanced or metastatic radioactive iodine (RAI)-refractory differentiated thyroid cancer met its primary endpoint of a statistically significant improvement in progression-free survival. Based on these data, we plan to apply for marketing authorization for sorafenib in the treatment of RAI-refractory differentiated thyroid cancer. Sorafenib is also being investigated in Phase III registration studies as an adjuvant therapy following curative tumor resection in patients with renal cell carcinoma and hepatocellular carcinoma. We are also conducting Phase III studies in breast cancer. Two Phase III clinical trials with sorafenib did not show the desired results: a study in patients with advanced non-small-cell lung cancer whose disease had progressed after two or three previous treatments and a combination study with sorafenib and erlotinib in liver cancer did not meet their primary endpoints.

Research and development expenditures in the **Consumer Health** segment amounted to €396 million (2011: €392 million), or 5.1% (2011: 5.4%) of segment sales.

In our **Consumer Care** Division, research and development activities at the product development centers in Morristown, New Jersey, United States, and Gaillard, France, focus on developing non-prescription (over-the-counter = OTC) products, medical skincare products and nutritional supplements to market maturity. These activities center on supporting both existing and new brands. Aligned to end consumers, our development strategies are geared toward expanding and improving our brand portfolio through new products, packaging and delivery forms using the latest technologies. We also work to achieve reclassification of current prescription medicines as OTC products. We introduced a number of new product line extensions to various markets in 2012. They included new delivery forms and uses for existing brands such as Canesten™, Bepanthen™/Bepanthol™ and Alka-Seltzer Plus™.

The research and development activities of our **Medical Care** Division focus on blood glucose monitoring and the continuing development of contrast agents and medical equipment used in the diagnosis or treatment of various diseases.

At the four U.S. research and development locations for our diabetes care business, the largest of which is in Tarrytown, New York, we are working to strengthen our product lines and continue expanding into attractive segments of the diabetes market. We made further progress in 2012 with the launch of several innovative products in key markets to meet the specific needs of people with diabetes. Examples include the next generation of Contour™ XT (Contour™ Next EZ in the U.S.) and Contour™ Next USB blood glucose meters and the new Contour™ Next sensors, which demonstrate superior accuracy compared to competitive systems.

The aim of our research and development activities in the area of contrast agents and medical equipment is to steadily improve our contrast agents and our contrast injection, thrombus removal and other vascular intervention systems in order to build on our leadership position. We also intend to enter additional attractive segments such as medical data management tools for contrast agents and contrast injection systems. Our research and development centers are located near Pittsburgh, Pennsylvania, and Minneapolis, Minnesota, in the United States; in Berlin, Germany; and in Sydney, Australia. In August 2012, the European regulatory authorities extended their approval of the contrast agent Gadovist™ (active ingredient: gadobutrol) to include the diagnosis of diseases in the whole body by magnetic resonance imaging (MRI). Further clinical studies are currently ongoing with gadobutrol in a variety of indications for marketing approval in other countries. Gadovist™/Gadavist™ was first registered in 1998 and is now approved in more than 90 countries. In September 2012, we introduced our Jetstream™ atherectomy system at the annual meeting of the Cardiovascular and Interventional Radiological Society of Europe (CIRSE). The device can be used to treat a wide range of vessel diameters and features continuous active aspiration to remove excised stenotic material and thrombus from the treatment site. A unique technology allowing its use in thrombus, soft plaque and calcified lesions, the Jetstream™ device offers an additional treatment option for peripheral artery disease (PAD).

The **Animal Health** Division focuses its research and development activities at the Monheim site in Germany on antibiotics and antiparasitics as well as active substances to treat non-infectious disorders in animals. The research activities of Animal Health have been integrated with the Global Drug Discovery unit of BHC since March 2011. The advantage lies in the joint use of technology platforms and the pooling of know-how and experience in drug discovery. At the same time, Animal Health continues to collaborate with CropScience research, especially in the area of parasitology. Thus we are exploiting the advantage we have as the only company in the world that conducts research within the same organization into improving the health of people, animals and plants. As well as developing new products to combat bacterial infections and parasites in companion animals and livestock, we are continuing to expand the product portfolio for the treatment of chronic kidney diseases in cats. In addition, a number of product line extensions were approved in different markets, such as Seresto™ (active ingredients: imidacloprid and flumethrin) in Europe. Seresto™ is a collar for dogs and cats with considerably longer duration of action against ticks and fleas.

Strategic cooperation in research and development

Open innovation

We gain access to complementary technologies and external innovation potential through strategic collaborations with partners. Our **Pharmaceuticals** segment works with various partners during the individual development stages of a medicine. A number of examples are listed in the following table:

Pharmaceuticals Cooperation Partners [Table 3.30]

Partner	Cooperation objective
Algeta ASA	Codevelopment of radium-223 dichloride for the treatment of hormone-refractory prostate cancer patients with bone metastases
Amgen Research GmbH	Access to BiTE™ antibodies for developing novel tumor therapies
Ardea Biosciences Inc.	Codevelopment of oncological products based on MEK (mitogen-activated ERK kinase) inhibitors
BioInvent International AB	Access to antibody library with antibody inlicensing option
Celera Corp.	Expansion of oncology research portfolio
German Cancer Research Center	Strategic partnership along the entire R&D value chain
Dyax Corp.	Access to antibody library with option to develop novel tumor therapies
EndoCeutics Inc.	Development of prasterone to treat vaginal atrophy and female sexual dysfunction
Evotec AG	Research collaboration to identify and validate development candidates in endometriosis
ImmunoGen Inc.	Inlicensing of a technology to develop antibody-linked toxins
Janssen Pharmaceuticals Inc. of Johnson & Johnson	Development of Xarelto™ (rivaroxaban)
Ludwig Boltzmann Institutes	Research into lung vascular disease, especially pulmonary hypertension; search for ways to treat heart-muscle weakness
Nektar Therapeutics	Codevelopment of a targeted antibiotic inhalation therapy for lung infections (Amikacin Inhale)
Novartis AG	Development of a targeted antibiotic inhalation therapy for lung infections (Ciprofloxacin Inhale)
OncoMed Pharmaceuticals Inc.	Discovery and development of novel anti-cancer stem cell therapeutics
Onyx Pharmaceuticals Inc.	Codevelopment of Nexavar™ and development of regorafenib in various types of cancer
Prometheus Laboratories Inc.	Development of diagnostic in-vitro assays for personalized medicine
Qiagen Manchester Ltd.	Development of companion diagnostic tests in oncology
Regeneron Pharmaceuticals Inc.	Development of aflibercept to treat eye dieases
Seattle Genetics Inc.	Inlicensing of a technology to develop antibody-linked toxins
Trius Therapeutics Inc.	Codevelopment of tedizolid to treat a range of infections
Tsinghua University	Establishment of a joint research center

In 2008 we entered into a strategic alliance with the German Cancer Research Center (DKFZ) in Heidelberg, Germany, which is focused on the identification and early development of new therapeutic approaches for cancer. This collaboration is designed to turn new scientific discoveries about cancer into new medicines or therapies as quickly as possible. In 2011, the partnership was extended for an additional three years. A total of 19 projects have been initiated so far.

Since 2009, we have operated the internet platform "Grants4Targets." With this crowdsourcing approach, we give researchers at universities, other research institutions or start-up companies the opportunity to propose biological target structures for cooperation with Bayer through an internet portal. We make expertise and financial assistance available to researchers to support the discovery of new therapeutic approaches in oncology, gynecology, cardiology and hematology. By combining the expertise of

industry and academia, we aim to accelerate the progression from fundamental research to new and promising treatment options. A total of 825 applications have been submitted via internet so far, of which 114 projects are receiving support.

Since 2011, we have been collaborating with the Ludwig Boltzmann Institute (LBI) for Pulmonary Vessel Research in Austria on research into disorders of the pulmonary blood vessels, particularly pulmonary hypertension. A further collaboration with a Ludwig Boltzmann Institute, the LBI for Translational Heart Failure Research in Austria, was formed in October 2011 to search for new approaches to treat myocardial insufficiency.

In March 2012, we signed an agreement with Tsinghua University in Beijing, China, to collaborate over a three-year period in the field of biomedical sciences. The agreement further expands our existing strategic cooperation at the Bayer-Tsinghua Joint Research Center for Innovative Drug Discovery (BTC).

In April 2012, we extended our cooperation with Amgen Research GmbH, Munich, Germany, to include the research, development and commercialization of a new bispecific T-cell engager (BiTE™) antibody against a new, undisclosed target structure expressed in multiple tumors. Under the terms of the present agreement, we will collaborate with Amgen from the research phase through the completion of any Phase I clinical trials, upon which we will assume full control of further development and potential commercialization of the antibody.

In September 2012, we opened "CoLaborator™" – a new center in the Mission Bay district of San Francisco, California, United States, for young bioscience firms. This incubator concept is geared toward supporting young start-up companies founded by academic researchers. The scientists benefit from both the laboratory infrastructure and the expertise of the Bayer researchers and the potential this offers for the professional, goal-oriented design of development programs. At the same time, we aim to be the initial contact point for young companies in their search for possible cooperation partners.

In October 2012, we entered into a strategic alliance with Evotec AG, Hamburg. Together with this company we will carry out research into multiple target molecules associated with endometriosis over a five-year period. The aim is to identify three drug candidates for clinical development in the treatment of this disorder.

In October 2012, we signed an agreement with Qiagen Manchester Ltd., U.K., to jointly develop molecular in-vitro tests, also known as companion diagnostics. These tests are to be used to identify patients who are highly likely to respond to new cancer drugs from HealthCare.

CROPSCIENCE

One of the aims of CropScience is to offer its customers tailored and innovative solutions for selected crops along the entire value chain, and in doing so to support agriculture and help to feed the world population. To achieve this aim, CropScience is investing heavily to research and develop new products, focusing increasingly on seed and new growth areas such as plant health and stress tolerance. CropScience also utilizes its global network of partners from science and industry to drive growth through joint development projects.

In 2012, €782 million (2011: €723 million) in research and development expenditures, or 26.0% of the Bayer Group total, were made in the CropScience subgroup. This was equivalent to 9.3% (2011: 10.0%) of subgroup sales.

CropScience maintains a global network of research and development facilities employing some 4,400 people. Our largest R&D sites for crop protection products are located in Monheim and Frankfurt am Main, Germany, and in Lyon, France. The major research centers of the Seeds unit, which focuses on improving seed through seed technology and breeding, are located in Ghent, Belgium; Haelen, Netherlands; and in Morrisville, North Carolina, and Lubbock, Texas, United States. The acquisition of AgraQuest, Inc. added a new facility for biological crop protection products in Davis, California, United States, to the research and development network.

While research is carried out centrally at a small number of sites, our development and plant breeding activities take place both at these sites and at numerous field testing stations across the globe. This ensures that future active substances and crop varieties can be tested according to specific regional requirements.

To better respond to the future development of global markets, we are increasing our research and development spending in the Seeds unit, with its seeds and traits, and in new growth areas such as plant health and stress tolerance. Our biologics research, which focuses on biological crop protection products, is also to be expanded following the acquisition of U.S. company AgraQuest. We plan to invest a total of some €5 billion in research and development between 2011 and 2016.

As part of our integrated research approach, our scientists in the fields of seed technology, agricultural chemistry and biologics are working increasingly closely to optimally pool the expertise acquired through chemical and biological research as well as field development, and align it to our long-term research objectives and business strategies for the various crops.

In the **Crop Protection** unit, we identify and develop innovative, safe and sustainable products for use in agriculture as insecticides, fungicides, herbicides or seed treatments. In the fields of chemistry, biology and biochemistry, modern technologies such as genetic analysis, high-throughput screening and bioinformatics play an important role in identifying new chemical lead structures. Collaborations with external partners complement our own activities.

In addition, we are broadening the range of uses for our products by developing new mixtures or innovative formulations of products already on the market so that they can be applied in additional crops or be made easier to handle.

In addition to numerous seed varieties, our integrated product pipeline in crop protection and seed technology contains a total of over 30 projects with estimated launch dates between 2011 and 2016 and a combined peak sales potential in excess of €4 billion. During this period, Crop Protection plans to begin marketing for eight projects in the area of chemical crop protection and a number of biological crop protection products; in our Seeds business, we plan to bring more than 15 projects to market-readiness for the broad-acre crops of cotton, oilseed rape/canola, rice, wheat and soybeans alone; and we also intend to launch several hundred new vegetable varieties under the Nunhems™ brand.

During 2012 we achieved further progress with product registrations. For example, the fungicide **Luna™** (fluopyram) was approved by the U.S. Environmental Protection Agency (EPA). It was already available in the United States for the 2012 growing season. Luna™ was developed to combat a number of problematic fungal diseases in fruit and vegetables. It enables excellent disease control and ensures better storability and longer shelf life of the harvested produce, thus playing an important part in ensuring supply security. Luna™ is now approved in various countries of North America, Europe, Latin America, Asia and Africa. In March 2012, we were granted the first marketing authorization worldwide from the Canadian authorities for the new fungicidal seed treatment **EverGol™** (penflufen) and began introducing this product to the market. Further registrations for the **EverGol™/Emesto™** product line were received in the United States. These products offer farmers much better options for controlling fungal diseases even at very low application rates.

In addition to numerous new formulations, we plan to launch three promising new chemical crop protection products during the period through 2016, subject to their successful registration:

Planned Product Launches [Table 3.31]

Product (active ingredient)	Indication	Planned launch
Sivanto™ (flupyradifurone)	Insecticide to control sucking pests such as aphids, cicadas and whiteflies in fruits, vegetables and broad-acre crops	2014/2015
New Bayer brand (N.N.)	Insecticide	2014
New Bayer brand (triafamone)	Herbicide: control of various weeds, including millet and grass species; preventive application possible	2015

Another event in 2012 was the acquisition by CropScience of U.S. company AgraQuest, Inc., headquartered in Davis, California. The transaction closed in August 2012 and will enable CropScience to further expand its research and its product pipeline in the area of biological crop protection. AgraQuest is a global supplier of innovative biological pest management solutions based on natural microorganisms. The acquisition is also aimed at enabling us to build a leading technology platform for biological crop protection products and further strengthen our strategically important vegetables business.

In **Seeds** we are conducting research to improve plant traits and are developing new seed varieties in our established core crops – cotton, oilseed rape/canola, rice and vegetables. We have extended our research activities to include two new core crops – cereals and soybeans. Our research and development activities focus on the agronomic traits of these crops. Our researchers are working to increase the quality and yield potential of crop plants – for example, by improving the profile of rapeseed (canola) oil or enhancing the properties of cotton fibers. We are also targeting the development of plants with high tolerance against external stress factors such as extreme temperatures and drought. Further areas of focus include developing new herbicide tolerance technologies based on alternative mechanisms of action, and improving insect resistance and disease tolerance. To do this we employ modern breeding techniques ranging from marker-assisted breeding to plant biotechnology methods.

In addition to our own proprietary products, we have strengthened our Seeds business through strategic acquisitions. In 2012, for example, we acquired the watermelon and melon seed business of Abbott & Cobb Inc., headquartered in Feasterville, Pennsylvania, United States. The acquisition supports our vegetable seed business. We also formed several research alliances in 2012, including a collaboration for the development and marketing of wheat with the Texas AgriLife research institute of Texas A&M University in the United States. These partnerships will support our enhanced focus on the Seeds business.

Business growth at Seeds is also supported by the introduction of new varieties and traits.

In the first quarter of 2012, we began commercializing conventional oilseed rape varieties in several European countries, thus taking a major step toward regional expansion in this crop.

In 2011, we launched our proprietary glyphosate herbicide tolerance technology **GlyTol™** in **FiberMax™** cotton seed varieties in the United States.

In 2014, we plan to offer a new combined insect-resistance and herbicide-tolerance solution for cotton, featuring both **TwinLink™** and GlyTol™ technologies for the first time, offering farmers integrated pest and weed control. We also expect to launch a new hybrid canola seed line in Australia in 2014.

Starting in 2014, we plan to commercialize a number of new hybrid rice varieties with improved stress and insect resistance under the **Arize™** brand.

By 2015 we intend to offer soybean farmers in North America a groundbreaking herbicide-tolerant trait stack with a new mode of action. This product will be tolerant to both isoxaflutole and glyphosate herbicides and will be an important resistance management tool.

We are steadily bringing new vegetable seeds to market under the **Nunhems™** brand, with around 70 varieties introduced in 2012 and a comparable number of innovations anticipated for 2013.

The **Environmental Science** unit tests compounds developed by Crop Protection or with external partners and evaluates them for possible non-agricultural uses. Current development projects include gels and baits to combat insect pests, as well as herbicides, fungicides, biological solutions, and products for the control of disease-transmitting insects.

In 2012, the Environmental Science portfolio was further expanded in the United States – partly through the successful launch of **Esplanade™**, a product for professional users based on the active ingredient indaziflam, and the consumer product **Durazone™**. In Europe, we strengthened the Bayer Garden™ business by launching **Permaclean™**, our new combination product with residual action. Environmental Science also made good progress with the introduction of **LifeNet™** mosquito nets. Further registrations were achieved, and the product is now approved in 19 African countries.

Open innovation

CropScience has assembled a global network of research and industry partners from diverse segments of the agriculture industry, chemical and biological research, and the food industry. These cross-industry partnerships enable us to better understand and do justice to the needs of our customers over the long term.

CropScience conducts research in collaboration with many partners around the world. For example, we extended the successful research collaboration between CropScience and the Innovative Vector Control Consortium (IVCC) in the U.K. Initially established as a research consortium in November 2005, the IVCC has since evolved into a product development partnership (PDP). The IVCC contributes know-how and technical resources to jointly drive the development of new insecticides for vector control in the public health sector and the related information systems. The parties have agreed to cooperate for a further three years in the search for new active ingredients effective against mosquitoes, which transmit diseases such as malaria and dengue fever.

In the **Seeds** business, an important partnership exists with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Grains Research and Development Corporation (GRDC) in Australia. CropScience and the CSIRO began strategic collaborations in wheat research in 2009. The aim of the research partnership between CropScience, the CSIRO and the GRDC is to discover innovative ways to raise wheat yields and thus make global wheat production more sustainable. The partnership, announced in 2012, results from the development by the CSIRO of a biotechnological process that raised wheat yields in greenhouse testing.

Special mention should be made of our food chain partnerships. Our worldwide in-house network of country organizations enables us to collaborate with other companies throughout the global food chain, adding value to it in ways that include ensuring traceability and increasing the quality of produce. Our expertise in the crop protection and seeds businesses thus helps to create the basis for healthy nutrition, sustainable food production and compliance with food safety standards. Among the main partners

participating in the 240 food chain partnerships are U.S.-based PepsiCo, Inc., and Wal-Mart Stores, Inc., and the UNIVEG group of Belgium. As part of the project with UNIVEG, one of the world's largest fruit and vegetable wholesalers, quality table grapes from India reached the European market for the first time at the beginning of 2012. CropScience has developed its own identity document for participating farmers with the aim of improving traceability and data management. This identity document ensures that UNIVEG in Europe can satisfy the strict regulatory requirements regarding quality, safety, traceability and sustainability.

Strengthening research in the life sciences

Bayer is the only global company simultaneously researching improvements in human, animal and plant health. From this unique position, Bayer is also breaking new ground in terms of innovation strategy. Systematic, greatly intensified collaboration among researchers across subgroup boundaries is serving to stimulate innovation. In 2012, a concept was developed to enable researchers in our two life-science subgroups – HealthCare and CropScience – to make optimum use of collaboration opportunities. The concept includes a Life Sciences Fund that provides some €30 million annually in finance for new technology platforms and research projects established in collaboration with other companies or research institutes. The aim is to support central areas of research such as gene regulation, energy metabolism and molecular signaling pathways and to increase the joint use of groundbreaking technology platforms. Systematically exploiting life-science synergies in this way will enable Bayer to continue strengthening its innovative potential in pharmaceuticals, animal health and the agriculture business.

MATERIALSCIENCE

Research activities at MaterialScience are focused in part on the development of plastics manufacturing processes that conserve energy and resources. In addition, the subgroup works closely with customers to develop new applications for our high-tech materials that can help to improve energy and resource efficiency or safety, for example.

In 2012, MaterialScience spent €242 million (2011: €237 million) for research and development. The subgroup thus accounted for roughly 8.0% of the Bayer Group's total research and development expenses. The ratio of R&D expenses to sales in the subgroup itself was 2.1% (2011: 2.2%). In addition, MaterialScience spent €115 million (2011: €118 million) on joint development projects with customers.

A total of about 900 people were employed in research and development in 2012, many of them at our Innovation Centers in Leverkusen, Germany, and Pittsburgh, Pennsylvania, United States, or at the Polymer Research & Development Center in Shanghai, China. The facility in Shanghai was expanded in 2011 and plays a key role in developing new products for the Asian market and enlarging Bayer's technical expertise in the region. At the same time, this local presence is aimed at more closely linking the company's research and development activities with customers in the emerging markets.

The focus in the **Polyurethanes (PUR)** business unit is on further increasing the efficiency of polyurethane rigid foam as an insulating material against cold and heat. Polyurethane plays a key role in helping to reduce energy consumption and protect the climate, especially in the construction industry and along the cold storage chain. Our innovations are geared toward further enhancing the material's insulating properties and optimizing flame retardancy in particular.

An exemplary innovation that considerably raises energy efficiency in refrigerated appliances is our **Baytherm™ Microcell.** Compared with current standard solutions, this novel material has up to 10% lower thermal conductivity thanks to substantially smaller pores. An efficient cold storage chain is of great importance, particularly in light of increasing urbanization in the emerging countries. We aim to support economic development in these countries with innovations on many levels – such as mobility.

In the automotive industry, techniques such as lightweight construction, which reduces fuel consumption, are rapidly gaining ground. Our polyurethane supports this trend. Our new **Bayflex™ RIM** system, which is lighter even than water, enables an up to 30% weight reduction in car body parts.

In the area of process development, we aim to further improve efficiency in order to safeguard our cost leadership for the long term. Our objective is to manufacture polyurethane raw materials with minimum energy consumption and greenhouse gas emissions. For example, we are working on the use of renewable raw materials – and also of carbon dioxide – as feedstocks for polymers. In early 2011, for example, we started up a globally unique pilot plant in Leverkusen that produces polyether polycarbonate polyol (PPP) – a starting material for polyurethanes – using waste carbon dioxide.

Our research and innovation activities in the **Polycarbonates (PCS)** business unit focus on developing new products, particularly for weight-saving applications, that set new energy efficiency and safety standards and allow greater design freedom. Here we concentrate on selected development areas.

In the consumer electronics sector, new applications for our materials are resulting in components that are lighter, more compact, flame-retardant and at the same time break-resistant. MaterialScience therefore cooperates with partners – including the Institute for Composite Materials (IVW) in Kaiserslautern, Germany – to develop reduced-weight and glass-fiber-reinforced materials for applications such as ultra-mobile laptops. These materials enable the production of extremely thin-walled yet durable housing components that cater both to consumers' habits and to the IT industry's stringent flame-retardancy requirements.

We are also developing polycarbonate materials for LED illumination management. LEDs have a broad array of applications – from street lighting to special uses such as the front headlamps of vehicles. Here, the considerably lower electricity consumption and the ability to produce ultra-small lamps play a major role. A current focus is on building a portfolio of materials for this field of application. In addition to materials with customized optical properties, such as those for optical lenses or light guides, we are developing a thermally conductive material to direct the heat development that occurs particularly in LEDs away from the housing.

Another innovation is the use of recycled plastics such as **Bayblend™ GR** polycarbonate blends in laptop housings, for example.

In the **Coatings, Adhesives, Specialties (CAS)** business unit, we are driving the development of raw materials for high-performance polyurethane coatings, adhesives and sealants.

Extreme-durability coatings are used in automobiles, buses, trains, ships and airplanes, for example, and are also needed for wind turbines, pipelines and steel structures. All of these markets are showing strong, steady growth. Our development work is directed toward the next generation of environmentally friendly coatings, which consume less resources and can be more efficiently applied. Here we are concentrating on low-solvent, solvent-free and waterborne systems. As we continue to develop our adhesives and sealants portfolio, we are again focusing on environmentally compatible and user-friendly systems to replace the solvent-based systems that still are widely used.

In addition to these conventional fields of application, we are evolving our portfolio of products and solutions toward new and lucrative market segments based on the outstanding mechanical and optical properties and broad diversity of aliphatic polyurethane systems.

Our activities in functional films partly center on products based on polycarbonates or thermoplastic polyurethanes. Multifunctional or holographic films are created by using additional surface technologies and modifying the material properties. These open up new fields of application in attractive areas such as 3D flat panel displays. Another area of focus is on electroactive polymers (EAP) as a platform technology. Our research activities relate mainly to polymer films that serve as a basis for developing alternative engine and generator designs and sensor films together with industrial partners.

In addition to specific development activities, we are also involved in certain interdisciplinary developments. An example is a special system solution for the manufacture of coated parts for use in automotive interiors, for example. It is produced in a single process step, yielding significant cost advantages and boosting productivity.

Open innovation

In line with the open innovation approach, MaterialScience increasingly collaborates with external scientific institutions such as RWTH Aachen University in Germany and the Chinese Academy of Sciences, China. Our innovation capability is also spurred by collaborations with customers or other industry sectors, such as via the future_bizz corporate network (WWW.FUTURE-BIZZ.DE). We aim to work with the best partners from the industry sectors that are important to us in order to combine competencies and turn them into innovations. External networks in science and industry are nurtured both by the business units and centrally through the New Business department.

A successful alliance with Kast GmbH & Co., Germany, and the Institute of Concrete Structures and Building Materials at Karlsruhe Institute of Technology (KIT) involves the development of a special adhesive for buildings. In combination with a glass fiber fabric, it can strengthen masonry and thus delay the collapse of walls in the event of an earthquake. Another advantage of the system, named **EQ-Top™**, is that it is easy to use because it can be hung like wallpaper.

In the area of energy efficiency, we developed the innovative, modular street lighting concept "Eco StreetLine" in cooperation with Hella KgaA, Germany. The use of efficient LED technology reduces energy consumption compared with conventional street lighting, while the long service life of the optical lenses cuts operating costs.

In collaboration with Hella KGaA and the Fraunhofer Institute of Laser Technology in Aachen, Germany, we have also developed a process chain for the manufacture of plastic free-form optics for automotive lighting. The project received funding from the German Ministry of Education and Research.

BAYER TECHNOLOGY SERVICES

Bayer Technology Services is an important research, development and engineering partner for the entire Bayer Group. All Bayer subgroups work closely with this service company worldwide on technology solutions, particularly in the fields of process technology, plant engineering, automation and product development.

Technology Services supports all Bayer subgroups with technology platforms

Together with the subgroups, Bayer Technology Services is developing new energy- and resource-efficient production processes to safeguard technology and cost leadership over the long term. An example is polymer synthesis for MaterialScience. Centralized development work on technologies relevant to more than one subgroup, such as nanotechnology and biotechnology, along with expertise in mathematical simulation and statistical data analysis, is important for HealthCare and CropScience so that they can accelerate the development of new products. This also includes the development of entirely new production concepts at facilities such as the INVITE research center, a collaborative venture between Bayer Technology Services and Dortmund Technical University. New flexible, modular production concepts being developed for HealthCare are an example in this area.

12. Takeover-Relevant Information

EXPLANATORY REPORT PURSUANT TO SECTIONS 289 PARAGRAPH 4 AND 315 PARAGRAPH 4 OF THE GERMAN COMMERCIAL CODE (HGB)

The capital stock of Bayer AG amounted as of December 31, 2012 to €2,117 million, divided into 826,947,808 no-par bearer shares. The capital stock and the number of shares were thus unchanged from the end of the previous year. Each share confers one voting right.

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We publish voting rights announcements at: WWW.INVESTOR.BAYER.COM/STOCK/OWNERSHIP-STRUCTURE

A small number of shares may be subject to temporary trading restrictions, such as retention periods, in connection with employee stock participation programs.

We received no notifications in 2012 of direct or indirect holdings of shares in Bayer AG that exceed 10% of the capital stock. The company thus is not in possession of any notifications of holdings that exceed 10% of the capital stock.

Pursuant to Section 84, Paragraph 1 of the German Stock Corporation Act (AktG), the members of the Board of Management are appointed and dismissed by the Supervisory Board. Since Bayer AG falls within the scope of the German Codetermination Act, the appointment or dismissal of members of the Board of Management requires a majority of two thirds of the votes of the members of the Supervisory Board on the first ballot. If no such majority is achieved, the appointment may be approved pursuant to Section 31, Paragraph 3 of the Codetermination Act on a second ballot by a simple majority of the votes of the members of the Supervisory Board. If the required majority still is not achieved, a third ballot is held. Here again, a simple majority of the votes suffices, but in this ballot the Chairman of the Supervisory Board has two votes pursuant to Section 31, Paragraph 4 of the Codetermination Act. Under Section 6, Paragraph 1 of the Articles of Incorporation of Bayer AG, the Board of Management must comprise at least two members. The Supervisory Board may appoint one member to be Chairman of the Board of Management pursuant to Section 84, Paragraph 2 of the German Stock Corporation Act or Section 6, Paragraph 1 of the Articles of Incorporation.

Under Section 179, Paragraph 1 of the German Stock Corporation Act, amendments to the Articles of Incorporation require a resolution of the Stockholders' Meeting. Pursuant to Section 179, Paragraph 2 of the German Stock Corporation Act, this resolution must be passed by a majority of three quarters of the voting capital represented at the meeting, unless the Articles of Incorporation provide for a different majority. However, where an amendment relates to a change in the object of the company, the Articles of Incorporation may only specify a larger majority. Section 17, Paragraph 2 of the Articles of Incorporation of Bayer AG utilizes the scope for deviation pursuant to Section 179, Paragraph 2 of the German Stock Corporation Act and provides that resolutions may be passed by a simple majority of the votes or, where a capital majority is required, by a simple majority of the capital.

Provisions of the Articles of Incorporation concerning Authorized Capital I and Authorized Capital II are entered in the commercial register of Bayer AG. With the approval of the Supervisory Board and until April 29, 2015, the Board of Management may use the Authorized Capital I to increase the capital stock by up to a total of €530 million. New shares may be issued against cash contributions and/or contributions in kind, but capital increases against contributions in kind may not exceed a total of €423 million. If the Authorized Capital I is used to issue shares in return for cash contributions, stockholders must normally be granted subscription rights. The Board of Management may only exclude stockholders' subscription rights to shares issued out of the Authorized Capital I that do not represent more than 20% of the existing capital stock. Absent a further resolution on the exclusion of stockholders' subscription rights, the Board of Management also may only exclude stockholders' subscription rights to shares issued under other authorizations regarding capital measures (Authorized Capital II, bonds with warrants or convertible bonds, purchase and sale of own shares) provided that such shares do not in total represent more than 20% of the existing capital stock.

With the approval of the Supervisory Board and until April 29, 2015, the Board of Management is also authorized to increase the capital by up to €212 million in one or more installments by issuing shares out of the Authorized Capital II in exchange for cash contributions. The stockholders must normally be granted subscription rights. However, the Board of Management is authorized, with the approval of the Supervisory Board, to exclude subscription rights for stockholders provided the capital increase out of the Authorized Capital II does not exceed 10% of the capital stock existing at the time this authorization becomes effective or the time this authorization is exercised and the issue price of the new shares is not significantly below the market price of the already listed shares.

Conditional capital of €212 million exists in connection with an authorization – valid through April 29, 2015 – to issue bonds with warrants or convertible bonds, profit-sharing rights or profit participation bonds (collectively referred to as "bonds") with a total face value of €6 billion. The Board of Management may, with the consent of the Supervisory Board and under certain conditions, exclude the bond subscription rights that would otherwise be granted to stockholders. One of the conditions is that the total amount of the shares required to service the bonds does not exceed 10% of the capital stock. Any other shares issued without granting subscription rights to the stockholders in direct or analogous application of Section 186, Paragraph 3, Sentence 4 of the German Stock Corporation Act shall be credited against this 10% limit. Further, the 2010 Annual Stockholders' Meeting authorized the Board of Management to purchase and sell company shares representing up to 10% of the capital stock. This authorization also expires on April 29, 2015.

A material agreement that is subject to the condition precedent of a change of control pertains to the undrawn €3.5 billion syndicated credit facility arranged by Bayer AG and its U.S. subsidiary Bayer Corporation. This facility is initially available until 2017 following a one-year extension. The participating banks are entitled to terminate the credit facility in the event of a change of control at Bayer and demand repayment of any loans that may have been granted under this facility up to that time.

In addition, the terms of the €3.3 billion (as of December 31, 2012) in notes issued by Bayer in the years 2006 to 2012 under its multi-currency European Medium Term Notes program also contain a change-of-control clause. Holders of these notes have the right to demand the redemption of their notes by Bayer AG in the event of a change of control if Bayer AG's credit rating is downgraded within 120 days after such change of control becomes effective.

Agreements exist for the members of the Board of Management in compliance with Section 4.2.3 of the German Corporate Governance Code to cover the eventuality of a takeover offer being made for Bayer AG. Under these agreements, payments promised in the event of early termination of the service contract of a Board of Management member due to a change of control are limited to the value of three years' compensation and may not compensate more than the remaining term of the contract.

13. Corporate Governance Report

This Corporate Governance Report also constitutes the report pursuant to Section 3.10 of the German Corporate Governance Code.

13.1 Declaration on Corporate Governance *

* not part of the audited management report

DECLARATION BY THE BOARD OF MANAGEMENT AND SUPERVISORY BOARD
concerning the German Corporate Governance Code (May 15, 2012 version) pursuant to Section 161 of the German Stock Corporation Act**

Under Section 161 of the German Stock Corporation Act, the Board of Management and the Supervisory Board of Bayer AG are required to issue an annual declaration that the company has been, and is, in compliance with the recommendations of the "Government Commission on the German Corporate Governance Code" as published by the Federal Ministry of Justice in the official section of the electronic Federal Gazette (Bundesanzeiger), or to advise of any recommendations that have not been, or are not being, applied and the reasons for this. An annual declaration was last issued in December 2011 and amended in February 2012.

With respect to the past, the following declaration refers to the May 26, 2010 version of the Code. With respect to present and future corporate governance practices at Bayer AG, the following declaration refers to the recommendations in the May 15, 2012 version of the Code.

Pursuant to Section 161 of the German Stock Corporation Act, the Board of Management and Supervisory Board of Bayer AG hereby declare as follows:

1. The company has been in compliance with the recommendations of the Code since issuance of the last annual compliance declaration in December 2011 with the temporary exception stated in the amendment thereto dated February 2012. The recommendation given in Section 5.4.6 Paragraph 2 of the May 26, 2010 version of the Code was not complied with.

   The Annual Stockholders' Meeting 2012, acting on a proposal from the Board of Management and the Supervisory Board, resolved to introduce a new system of Supervisory Board compensation comprising fixed compensation only by way of an amendment to the Articles of Incorporation. Section 5.4.6 Paragraph 2 of the May 2010 version of the Code contained a recommendation that performance-related compensation be paid in addition to fixed compensation. The May 15, 2012 version of the Code no longer contains this recommendation.

2. All the recommendations of the Code are now being complied with in full.

Leverkusen, December 2012

For the Board of Management:



DR. DEKKERS BAUMANN

For the Supervisory Board:



WENNING

** This is an English translation of a German document. The German document is the official and controlling version, and this English translation in no event modifies, interprets or limits the official German version.

BAYER IN COMPLIANCE WITH THE RECOMMENDATIONS OF THE GERMAN CORPORATE GOVERNANCE CODE

Bayer has always placed great importance on responsible corporate governance and will continue to do so. In 2012 the company was able to issue a declaration that it had complied with the recommendations of the German Corporate Governance Code in the past with one temporary exception and was now fully compliant again. The deviation from Section 5.4.6 Paragraph 2 Sentence 1 of the May 26, 2010 version of the German Corporate Governance Code, stated in the February 2012 amendment to the previous declaration, no longer applies because the recommendation given in this section of the Code has since been altered.

In 2012, the Board of Management and Supervisory Board again addressed the question of compliance with the Corporate Governance Code, particularly in light of the Code amendments of May 15, 2012. The resulting declaration, which is reproduced on the previous page, was issued in December 2012 and posted on Bayer's website along with previous declarations.

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DUTIES AND ACTIVITIES OF THE BOARD OF MANAGEMENT

Bayer AG is a strategic management holding company, run by its Board of Management on the Board's own responsibility with the goal of sustainably increasing the company's enterprise value and achieving defined corporate objectives. The Board of Management performs its tasks according to the law, the Articles of Incorporation and the Board's rules of procedure, and works with the company's other governance bodies in a spirit of trust.

The Board of Management defines the long-term goals and the strategies for the Group, its subgroups and its service companies, and sets forth the principles and directives for the resulting corporate policies. It coordinates and monitors the most important activities, defines the portfolio, develops and deploys managerial staff, allocates resources and decides on the Group's financial steering and reporting.

The members of the Board of Management bear joint responsibility for running the business as a whole. However, the individual members manage the areas assigned to them on their own responsibility within the framework of the decisions made by the entire Board. The allocation of duties among the members of the Board of Management is defined in a written schedule.

The entire Board of Management makes decisions on all matters of fundamental importance and in cases where a decision of the entire Board is prescribed by law or otherwise mandatory. The rules of procedure of the Board of Management contain a list of topics that must be dealt with and resolved by the entire Board.

Meetings of the Board of Management are held regularly. They are convened by the Chairman of the Board of Management. Any member of the Board of Management may also demand that a meeting be held. The Board of Management makes decisions by a simple majority of the votes cast, except where unanimity is required by law. In the event of a tie, the Chairman has the casting vote.

According to the Board of Management's rules of procedure and schedule of duties, the Chairman bears particular responsibility for leading and coordinating the Board's work. He represents the company and the Group in dealings with third parties and the workforce on matters relating to more than one part of the company or the Group. He also bears special responsibility for certain departments of the Corporate Center and their fields of activity.

The schedule of duties also assigns particular areas of specialist responsibility to the other three members who served on the Board of Management in 2012 with respective responsibility for Finance; Innovation, Technology and Sustainability; and Strategy and Human Resources. Each of these members also represents certain geographical regions.

No committees of the Board of Management have been set up in view of the small number of members and the role of Bayer AG as a strategic management holding company.

SUPERVISORY BOARD: OVERSIGHT AND CONTROL FUNCTIONS

The role of the 20-member Supervisory Board is to oversee and advise the Board of Management. Under the German Codetermination Act, half the members of the Supervisory Board are elected by the stockholders, and half by the company's employees. The Supervisory Board is directly involved in decisions on matters of fundamental importance to the company, regularly conferring with the Board of Management on the company's strategic alignment and the implementation status of the business strategy.

The Chairman of the Supervisory Board coordinates its work and presides over the meetings. Through regular discussions with the Board of Management, the Supervisory Board is kept constantly informed of business policy, corporate planning and strategy. The Supervisory Board approves the annual budget and financial framework. It also approves the financial statements of Bayer AG and the consolidated financial statements of the Bayer Group, along with the combined management report, taking into account the reports by the auditor.

COMMITTEES OF THE SUPERVISORY BOARD

The Supervisory Board currently has the following committees:

Presidial Committee: This comprises the Chairman and Vice Chairman of the Supervisory Board along with a further stockholder representative and a further employee representative. The Presidial Committee serves primarily as the mediation committee pursuant to the German Codetermination Act. It has the task of submitting proposals to the Supervisory Board on the appointment of members of the Board of Management if the necessary two-thirds majority is not achieved in the first vote at a plenary meeting. Certain decision-making powers in connection with capital measures, including the power to amend the Articles of Incorporation accordingly, have also been delegated to this committee.

Audit Committee: The Audit Committee comprises three stockholder representatives and three employee representatives. The Chairman of the Audit Committee in 2012, Dr. Klaus Sturany, satisfies the statutory requirements concerning the independence and the expertise in the field of accounting or auditing that a member of the Supervisory Board and the Audit Committee is required to possess. The Audit Committee meets regularly four times a year. Its tasks include examining the company's financial reporting along with the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group, the combined management report, the proposal for the use of the distributable profit of Bayer AG, and the interim financial statements and management reports of the Bayer Group, all of which are prepared by the Board of Management. On the basis of the auditor's report on the audit of the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report, the Audit Committee develops proposals concerning the approval of the statements by the full Supervisory Board. The Audit Committee is also responsible for the company's relationship with the external auditor. The Audit Committee submits a proposal to the full Supervisory Board concerning the auditor's appointment, prepares the awarding of the audit contract to the audit firm appointed by the Annual Stockholders' Meeting, suggests areas of focus for the audit and determines the auditor's remuneration. It also monitors the independence, qualifications, rotation and efficiency of the auditor.

In addition, the Audit Committee oversees the company's internal control system – along with the procedures used to identify, track and manage risk – and the internal audit system. It also deals with corporate compliance issues and discusses developments in this area at each of its meetings.

Human Resources Committee: On this committee, too, there is parity of representation between stockholders and employees. It consists of the Chairman of the Supervisory Board and three other members. The Human Resources Committee prepares the personnel decisions of the full Supervisory Board, which resolves on appointments or dismissals of members of the Board of Management. The Human Resources Committee resolves on behalf of the Supervisory Board on the service contracts of the members of the Board of Management. However, it is the task of the full Supervisory Board to resolve on the total compensation of the individual members of the Board of Management and the respective compensation components, as well as to regularly review the compensation system on the basis of recommendations submitted by the Human Resources Committee. The Human Resources Committee also discusses the long-term succession planning for the Board of Management.

Nominations Committee: This committee carries out preparatory work when an election of stockholder representatives to the Supervisory Board is to be held. It suggests suitable candidates for the Supervisory Board to propose to the Annual Stockholders' Meeting for election. The Nominations Committee comprises the Chairman of the Supervisory Board and the other stockholder representative on the Presidial Committee.

Detailed information on the work of the Supervisory Board and its committees is provided in the Report of the Supervisory Board on page 40ff. of this Annual Report.

OBJECTIVES FOR THE COMPOSITION OF THE SUPERVISORY BOARD

The Supervisory Board should be composed in such a way that its members together possess the necessary expertise, skills and professional experience to properly perform their duties. In view of Bayer AG's global operations, the Supervisory Board has set itself the goal of always having several members with international business experience or an international background. A further objective concerning the composition of the Supervisory Board is that, absent special circumstances, its members should not hold office beyond the end of the next Annual Stockholders' Meeting following their 72nd birthday. With a view to avoiding potential conflicts of interest, the Supervisory Board has set itself the goal that more than half of the stockholder representatives be independent and also that at least three quarters of the total Supervisory Board membership (stockholder and employee representatives) be independent. The Supervisory Board assesses the independence of its members according to the recommendation contained in Section 5.4.2 of the May 15, 2012 version of the German Corporate Governance Code. In assessing independence, the Supervisory Board also considers the criteria given in the recommendation of the European Commission of February 15, 2005.[1]

Another goal for the composition of the Supervisory Board is to increase the proportion of women on the Supervisory Board to at least 20% in the medium term and for the female membership to be distributed as evenly as possible between the stockholder and employee groups. It is intended to achieve this goal when the entire Supervisory Board is elected in 2017.

The goals described refer to the Supervisory Board as a whole unless resolved otherwise. However, since the Supervisory Board can only nominate candidates for election as stockholder representatives, it can only take the targets into account in these nominations.

Implementation status of the objectives

The Supervisory Board has several members with international business experience and other international connections. The target maximum age of 72 is not exceeded by any member of the Supervisory Board. One member of the Supervisory Board, Werner Wenning, was the Chairman of the company's Board of Management until 2010. One member, Ernst-Ludwig Winnacker, has been a member of the Supervisory Board since 1997, and thus has served more than three terms of office. However, neither Mr. Wenning nor Mr. Winnacker has any personal or business relationship with the company or a governance body of the company that in the opinion of the Supervisory Board gives rise to a material conflict of interest of a more than temporary nature. The elections to the Supervisory Board held in 2012 resulted in an increase in the proportion of women on the Supervisory Board from 10% to 15%.

DISCLOSURE OF SECURITIES TRANSACTIONS BY MEMBERS OF THE BOARD OF MANAGEMENT OR SUPERVISORY BOARD

Members of the Board of Management and Supervisory Board and their close relatives are legally required to disclose all transactions involving the purchase or sale of Bayer stock where such transactions total €5,000 or more in a calendar year. Bayer publishes details of such transactions immediately on its website and also notifies the German Financial Supervisory Authority accordingly. This information is provided to the company register for archiving. No such transactions were reported to Bayer AG in 2012.

Information filed with the company by members of the Board of Management and Supervisory Board shows that, on the closing date for the financial statements, their total holdings of Bayer AG stock or related financial instruments were equivalent to less than 1% of the issued stock.

1 Annex 2 to the recommendation of the European Commission of February 15, 2005, on the role of non-executive or supervisory directors of listed companies and on the committees of the (supervisory) board (2005/162/EC)

COMMON VALUES AND LEADERSHIP PRINCIPLES

Bayer has committed itself to the values of Leadership, Integrity, Flexibility and Efficiency, or "LIFE" for short. These values provide guidance to all Bayer employees, both in business dealings and in working together within the company. All employees are obligated to align their work to the LIFE values. This is taken into account in human resources development and the regular performance evaluations.

SYSTEMATIC RISK MANAGEMENT

The established control system enables the company to identify any business or financial risks at an early stage and take appropriate action to manage them. This control system is designed to ensure that risks are monitored in a timely manner, all business transactions are properly accounted for, and reliable data on the company's financial position is always available.

When acquisitions are made, we aim to bring the acquired units' internal control systems into line with those of the Bayer Group as quickly as possible.

However, the control and risk management system cannot provide absolute protection against losses arising from business risks or fraudulent actions.

CORPORATE COMPLIANCE

Our corporate activity is governed by national and local laws and statutes that place a range of obligations on the Bayer Group and its employees throughout the world. Bayer manages its business responsibly and in compliance with the statutory and regulatory requirements of the countries in which it operates.

Bayer expects legally and ethically impeccable conduct from all of its employees in daily business operations, as the way they carry out their duties affects the company's reputation. By ensuring regular dialogue between employees and their supervisors and providing training courses involving the responsible Compliance Officers, the company endeavors to acquaint its employees with internal codes of behavior and with the numerous statutory and regulatory requirements of the countries where they work that are of relevance to them. This lays the foundation for managing the business responsibly and in compliance with the respective applicable laws.

The Board of Management states in the Corporate Compliance Policy that Bayer is unreservedly committed to corporate compliance and will forgo any business transactions that would violate compliance principles. The Policy also details the organizational framework for corporate compliance and specifies areas in which violations of applicable law can have particularly serious adverse consequences, both for the entire enterprise and for individual employees. The principles set forth in the Corporate Compliance Policy are designed to guide employees in their business-related actions and protect them from potential misconduct. Its core requirements are:

- adherence to antitrust regulations,
- integrity in business transactions and the ban on exerting any kind of improper influence,
- the observance of product stewardship and the commitment to the principle of sustainability,
- the strict separation of business and personal interests, and
- the commitment to ensure fair and respectful working conditions across the enterprise.

Employees may contact their respective supervisors or compliance functions for support and advice on ensuring legally compliant conduct in specific business situations.

Each country has a Compliance Officer, and some have several local compliance functions with clearly defined responsibilities for the different business units. The main responsibilities of each local compliance function include:

- providing advice to the operational business units,
- monitoring and assessing risks,
- running or arranging compliance training programs,
- investigating any reports of possible compliance violations and initiating appropriate corrective action, and
- satisfying reporting obligations defined at Group level.

The local Compliance Officers report to Group headquarters and ultimately to the Group Compliance Officer appointed by the Group Management Board. The Group Compliance Officer and the Head of Corporate Auditing jointly report at least once a year to the Audit Committee of the Supervisory Board on any compliance violations that have been identified.

The topic of integrity is a firmly established part of the performance objectives agreed with all managerial employees. By virtue of their positions, these employees have a special obligation to set an example, spread the compliance message increasingly within their companies and take organizational measures to implement it.

DETAILED REPORTING

To maximize transparency, we provide regular and timely information on the Group's position and significant changes in business activities to stockholders, financial analysts, stockholders' associations, the media and the general public. Bayer complies with the recommendations of the Corporate Governance Code by publishing reports on business trends, financial position, results of operations and related risks four times a year.

In line with statutory requirements, the members of the Group Management Board provide an assurance that, to the best of their knowledge, the financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report provide a true and fair view.

The financial statements of Bayer AG, the consolidated financial statements of the Bayer Group and the combined management report are published within 90 days following the end of each fiscal year. During the fiscal year, stockholders and other interested parties are kept informed of developments by means of the half-year financial report and additional interim reports for the first and third quarters. The half-year financial report is voluntarily subjected to an audit review by the auditor, whose appointment by the Annual Stockholders' Meeting also relates specifically to this audit review.

Bayer also provides information at news conferences and analysts' meetings. In addition, the company uses the internet as a platform for timely disclosure of information, including details of the dates of major publications and events, such as the annual report, quarterly financial reports (Stockholders' Newsletters) or the Annual Stockholders' Meeting.

INTERNET

For comprehensive information on Bayer, go to WWW.BAYER.COM

In line with the principle of fair disclosure, all stockholders and other principal target groups are treated equally as regards the communication of valuation-relevant information. All significant new facts are disclosed immediately to the general public. Stockholders also have immediate access to the information that Bayer publishes locally in compliance with the stock market regulations of various countries.

In addition to our regular reporting, we issue ad-hoc statements on developments that otherwise might not become publicly known but have the potential to materially affect the price of Bayer stock.

13.2 Compensation Report

The Compensation Report describes the essential features of the compensation system for the members of the Board of Management and the Supervisory Board and explains the compensation of the individual members. The report conforms to the requirements of the German Commercial Code including the principles of German Accounting Standard No. 17 (DRS 17). It also complies with the recommendations of the German Corporate Governance Code and the International Financial Reporting Standards (IFRS).

13.2.1 Compensation of the Board of Management

OBJECTIVES

The structure of the compensation system for the Board of Management of Bayer AG is aimed at ensuring performance-oriented corporate governance and a long-term increase in the company's value. The core elements of the system include a fixed annual salary, which takes into account the tasks and duties of the Board of Management members, and a short-term incentivized component that depends on the attainment of the annual corporate performance targets. In addition, there are two long-term stock-based components that are directly related to the development of Bayer's share price over time and thus are intended to create an incentive for a sustained commitment to the company. The system is also designed to enable the company to successfully compete for highly qualified executives and to ensure statutory and regulatory compliance. Board of Management compensation is in line with the basic principles of the compensation structure for managerial employees in the Bayer Group. The appropriateness of the system and the compensation level are regularly reviewed by the Supervisory Board, which then makes any necessary adjustments.

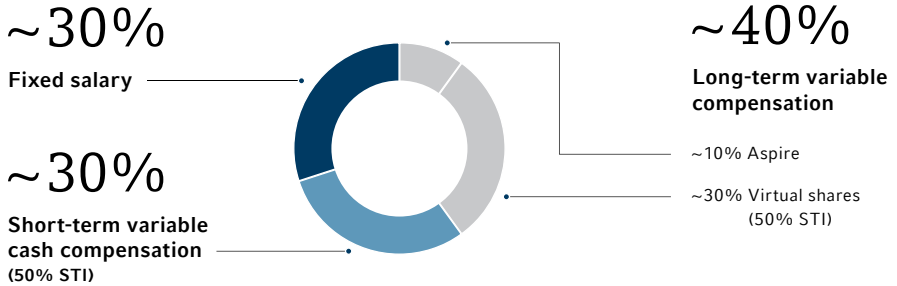
COMPENSATION STRUCTURE

The compensation paid to the members of the Board of Management includes both non-performance-related and performance-related components. The compensation structure, based on average total annual compensation and 100% target attainment, is as follows:

The non-performance-related compensation comprises the fixed annual salary along with compensation in kind and other benefits. The performance-related compensation partly comprises a variable component (STI), of which 50% takes the form of short-term variable cash compensation and 50% consists of long-term cash compensation involving a grant of virtual Bayer shares that are retained for three years. The other performance-related compensation component serving as a long-term incentive is the stock-based cash compensation program Aspire. Here, a four-year retention period applies.

The members of the Board of Management also receive pension entitlements for themselves and their surviving dependents.

Board of Management Compensation Stucture (German Commercial Code)* [Graphic 3.19]



* excluding compensation in kind, other benefits and pension entitlements

Non-performance-related components

Fixed annual salary

The level of the non-performance-related, fixed annual salary takes into account the functions and responsibilities assigned to the members of the Board of Management as well as market conditions. The fixed salary is regularly reviewed by the Supervisory Board in light of the consumer price indexes and adjusted if necessary. It is paid out in twelve monthly installments.

Compensation in kind and other benefits

This component mainly includes perquisites such as a company car with driver or the use of the company carpool, payments toward the cost of security equipment, and the reimbursement of the cost of annual health screening examinations. Compensation in kind and other benefits are reported at the value assigned to them for tax purposes.

Performance-related components

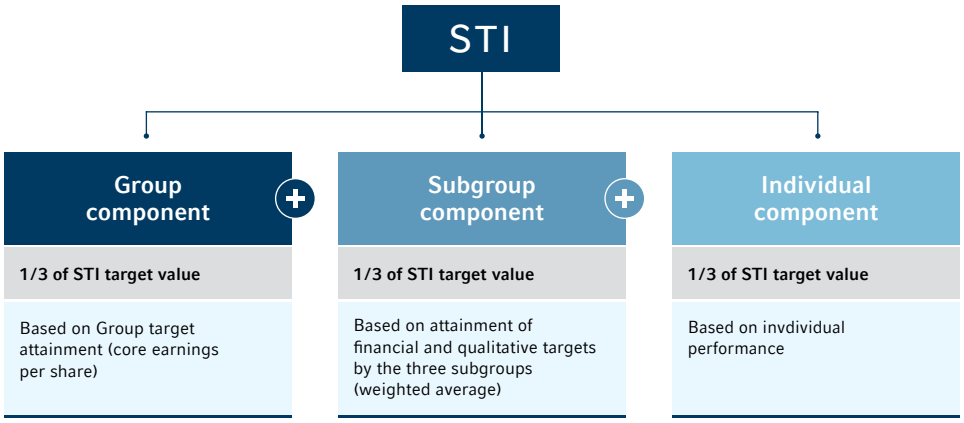
Short-term variable cash compensation

The short-term variable compensation (short-term incentive, or STI) is based on a set percentage of the fixed annual salary (target value). This amount is adjusted according to the target attainments of the Bayer Group, the subgroups and the individual Board of Management member.

The Group component is determined in relation to core earnings per share of the Group, while the subgroup components are governed by the weighted average target attainments of the HealthCare, CropScience and MaterialScience subgroups. The annual subgroup targets are derived from the respective business strategies and operational priorities. The target attainment criteria for the subgroups were adjusted in January 2012. Whereas the target attainment for HealthCare and CropScience is mainly based on the comparison of target and actual values for the EBITDA margin before special items and sales growth, performance at MaterialScience is measured for this purpose by the cash flow return on investment (CFROI). Through the end of 2011, the target attainment for all subgroups was derived from the comparison of target and actual values for the EBITDA margin before special items and sales growth, along with supplementary qualitative criteria.

The target attainment for the individual component of the variable compensation is determined by the Supervisory Board according to the performance of the individual Board of Management member. One half of the STI for each year is paid out in the second quarter of the following year, while the other half is granted in the form of virtual Bayer shares.

Short-Term Variable Compensation (STI) Components [Graphic 3.20]



Long-term variable cash compensation based on virtual Bayer shares

A cash payment with respect to the number of virtual shares held is made after three years according to the market price of Bayer shares at that time. Both the number of virtual shares granted and the amount of the payment at the end of the three-year period are based on the average official closing price of Bayer shares over the last 30 trading days of the respective year in the Xetra system of the Frankfurt Stock Exchange. In addition, they receive an amount equal to the total dividends paid on the equivalent number of real shares during the period. Payment is made in January of the year following the end of the three-year period. No option exists for the Board of Management members to extend the retention period or defer the payout.

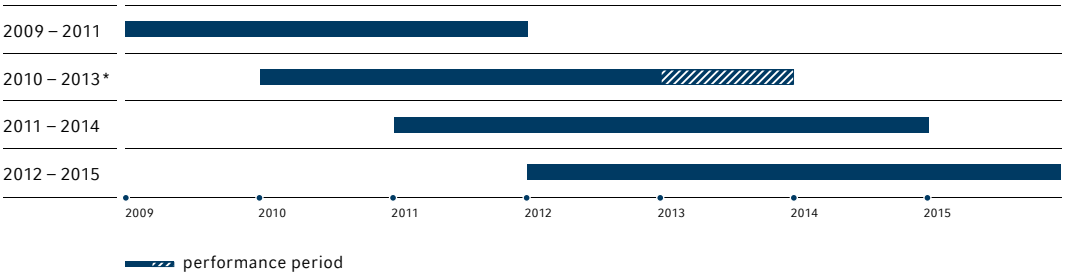
Long-term stock-based cash compensation (Aspire I)

Members of the Board of Management are eligible to participate in the annual tranches of the long-term stock-based compensation program Aspire I ("Aspire") on condition that they purchase a certain number of Bayer shares – determined for each individual according to specific guidelines – as a personal investment and for as long as they continue in the service of the Bayer Group. The payments made under this program are based on the Aspire Target Opportunity, which is a contractually agreed percentage of fixed annual salary. Depending on the performance of Bayer stock, both in absolute terms and relative to the EURO STOXX 50 benchmark index, participants are granted an award of between 0% and 300% of their individual Aspire Target Opportunity for four-year tranches, or between 0% and 200% for three-year tranches, at the end of the respective performance period. The Aspire program was switched from three- to four-year tranches starting in 2010 to increase its long-term incentive effect. For the transition year 2010, a three-year half-tranche was issued in addition to the four-year tranche. Starting in 2011, only tranches with a four-year performance period have been issued. The performance matrix and the respective amounts of the awards depending on the absolute and relative performances of Bayer stock are explained at HTTP://WWW.INVESTOR.BAYER.COM/EN/STOCK/STOCK-PROGRAMS/ASPIRE.

INTERNET

HTTP://WWW.INVESTOR.BAYER.COM/EN/STOCK/STOCK-PROGRAMS/ASPIRE

Tranches of the Aspire Program [Graphic 3.21]



* three- and four-year tranches of the Aspire program were issued in 2010

When a member of the Board of Management retires, current tranches may be shortened. In this case, tranches up to the one issued in 2011 are shortened on a pro-rated basis according to the duration of the member's active service on the Board of Management during the period of the tranche; tranches issued in 2012 or later are shortened according to the duration of the member's active service on the Board of Management during the first year of the tranche.

Expanded Share Ownership Guidelines

On top of the requirement for participants in the Aspire program to make a personal investment in Bayer shares, the members of the Board of Management have undertaken to comply with expanded Share Ownership Guidelines. These require the Chairman of the Board of Management to build a position in Bayer shares to the value of 150% of his fixed annual salary, and the other members to the value of 100% of their fixed annual salaries, within four years and to continue to hold them for as long as they remain Board of Management members. Half the number of virtual shares granted to them through con-

version of 50% of the STI into virtual shares counts toward this position. The Board of Management members must provide documentary evidence of their compliance with this obligation for the first time at the end of the four-year position-building period and again yearly thereafter. In the event of significant changes in fixed annual salary, the value to which shares are held must be adjusted accordingly.

Pension entitlements (retirement and surviving dependents' pensions)

The currently serving members of the Board of Management are generally entitled to receive a lifelong company pension after leaving the Bayer Group, though not before the age of 60. This pension is normally paid out in the form of a monthly life annuity. Dr. Dekkers has the option to receive a capital sum in place of an annuity.

The annual pension granted equals at least 15% of final fixed annual salary. This percentage can increase with continuing service on the Board of Management up to a maximum of 60%, except in the case of a member appointed prior to 2006, who is entitled to a pension of up to 80% of his final fixed annual salary. The arrangements for surviving dependents basically provide for a widow's pension amounting to 60% of the member's pension entitlement and an orphan's pension amounting to 15% of the member's pension entitlement for each child.

Future pension payments are annually reviewed and adjusted based on the development of consumer prices.

Pension rights are suspended if a Management Board member works for a competitor of Bayer AG or of another Group company before the age of 65 without the prior written consent of the Supervisory Board.

Benefits upon termination of service on the Board of Management

Severance payments

In line with the recommendation of the German Corporate Governance Code, an entitlement to severance pay can only arise if a Board of Management member's service contract is prematurely revoked by the company without serious cause. In this event payments, including ancillary benefits, are limited to the value of two years' compensation (severance payment cap) and may not compensate more than the remaining term of the contract. The severance payment cap is to be calculated on the basis of the fixed salary plus the target value of the short-term variable compensation for the previous year and, where applicable, the expected aggregate compensation for the current year in addition. Compensation payments for dismissal or severance payments are deducted from the annual pension on the basis of an equivalent annuity amount calculated according to actuarial principles.

Post-contractual non-compete agreements

Post-contractual non-compete agreements exist with some of the members of the Board of Management, providing for compensatory payments to be made by the company for the two-year duration of these agreements. The post-contractual non-compete agreement that originally existed with Dr. Pott was cancelled effective May 1, 2012 when his service contract was last renewed. For the members newly appointed to the Board of Management on or after January 1, 2010, the compensatory payment is 100% of the average fixed salary for the twelve months preceding their departure. This amount is fully offset against any severance payments or concurrent pension payments.

Change of control

Agreements exist with the members of the Board of Management providing for severance payments to be made in certain circumstances in the event of a change in control. The amount of any possible severance payments in the case of early termination of service on the Board of Management as a result of a change in control is limited to the value of three years' compensation in line with the recommendation in Section 4.2.3 of the German Corporate Governance Code. Such payments do not exceed the salary payable for the remaining term of the service contract.

Unfitness for work

In the event of temporary unfitness for work, members of the Board of Management continue to receive the contractually agreed compensation. Bayer AG may early terminate the service contract if the member has been continuously unfit for work for at least 18 months and is likely to be permanently incapable of fully performing his duties (permanent incapacity to work). A disability pension is paid in the event of contract termination before the age of 60 due to permanent incapacity to work. The disability pension, like the retirement pension, amounts to at least 15% of the final fixed salary and can increase with continuing service on the Board of Management up to a maximum of 60%.

COMPENSATION OF THE BOARD OF MANAGEMENT IN 2012

The aggregate compensation of the members of the Board of Management in 2012 totaled €12,997 thousand (2011: €11,155 thousand), comprising €3,541 thousand (2011: €3,396 thousand) in non-performance-related components and €9,456 thousand (2011: €7,759 thousand) in performance-related components. The pension service cost in 2012 amounted to €1,861 thousand (2011: €1,078 thousand). The membership of the Board of Management during 2012 was unchanged from 2011.

The following table shows the compensation components of the individual members of the Board of Management in 2012:

Board of Management Compensation (German Commercial Code) [Table 3.32]

	Fixed Salary		Compensation in Kind and Other Benefits		Short-term Variable Cash Compensation		Long-term Variable Cash Compensation Based on Virtual Bayer Shares[1]				Long-term Stock-Based Cash Compensation (Aspire)[2]		Aggregate Compensation		Pension Service Cost[3]	
	2011	2012	2011	2012	2011	2012	2011	2011	2012	2012	2011	2012	2011	2012	2011	2012
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	No. of shares[4]	€ thousand	No. of shares[4]	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Dr. Marijn Dekkers (Chairman)	1,216	1,271	69	35	1,420	1,702	30,666	1,420	24,228	1,702	362	352	**4,487**	**5,062**	522	561
Werner Baumann	641	783	119	44	653	979	14,104	653	13,928	979	191	186	**2,257**	**2,971**	119	1,056
Prof. Dr. Wolfgang Plischke	641	670	37	34	653	783	14,809	686	11,701	822	191	186	**2,208**	**2,495**	211	5
Dr. Richard Pott	641	670	32	34	653	783	14,809	686	11,329	796	191	186	**2,203**	**2,469**	226	239
Total	**3,139**	**3,394**	**257**	**147**	**3,379**	**4,247**	**74,388**	**3,445**	**61,186**	**4,299**	**935**	**910**	**11,155**	**12,997**	**1,078**	**1,861**

[1] fair value at conversion date
[2] fair value at grant date
[3] including company contribution to Bayer-Pensionskasse VVaG
[4] Since 2010, Prof. Plischke and Dr. Pott have received one additional virtual Bayer share for every 20 virtual Bayer shares resulting from the conversion of 50% of the STI into virtual Bayer shares to offset the effect of the change made to the system of variable cash compensation in 2010. This arrangement no longer applies to Dr. Pott under his new service contract effective May 1, 2012.

Fixed annual salary

The fixed salaries of all the members of the Board of Management were adjusted in 2012 and totaled €3,394 thousand (2011: €3,139 thousand).

Short-term variable cash compensation

The short-term variable cash compensation (short-term portion of the STI) for all the members of the Board of Management in 2012 totaled €4,247 thousand (2011: €3,379 thousand) after deduction of the solidarity contribution. Under agreements reached with the employee representatives, all employees of the companies covered by these agreements pay the solidarity contribution to help safeguard jobs at the German sites. For 2012 this contribution amounted to 0.67% (2011: 0.91%) of each member's total STI award.

Long-term variable cash compensation based on virtual Bayer shares

The conversion of 50% of the STI into virtual Bayer shares was based on an average price of €70.26 (2011: €46.32). Professor Plischke and Dr. Pott receive one additional virtual Bayer share for every 20 virtual Bayer shares resulting from the conversion to offset the effect of the change made to the system of variable cash compensation in 2010. This applies for the duration of the service contract in effect at that time. The additional virtual shares are subject to the same retention period and therefore to the same change in value. This arrangement no longer applies to Dr. Pott under his new service contract effective May 1, 2012.

The long-term variable cash compensation based on virtual Bayer shares that is included in the aggregate compensation according to the German Commercial Code was valued at €4,299 thousand (2011: €3,445 thousand). The aggregate compensation according to the IFRS also includes a change of €3,136 thousand (2011: minus €278 thousand) in the value of existing entitlements.

Provisions of €13,222 thousand (2011: €5,787 thousand) were established for the future cash disbursements to currently serving members of the Board of Management based on the virtual Bayer shares granted in the respective year. This amount also contains the dividend attributable to the respective prior year.

Long-term stock-based cash compensation (Aspire)

The long-term stock-based cash compensation under the Aspire program is included in the aggregate compensation according to the German Commercial Code at its fair value of €910 thousand (2011: €935 thousand) at the grant date.

According to the IFRS, the aggregate compensation includes the fair value of the partial entitlement earned in the respective year. Grants of stock-based compensation with a four-year performance period are therefore expensed at their respective fair values over four years starting with the grant year. The aggregate compensation according to the IFRS also includes the change in the value of existing entitlements under ongoing Aspire tranches granted in prior years.

Board of Management Compensation – Aspire Program (IFRS) [Table 3.33]

		Dr. Marijn Dekkers (Chairman)	Werner Baumann	Prof. Dr. Wolfgang Plischke	Dr. Richard Pott	Total
		€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Stock-based compensation entitlements earned in the respective year[1]	**2012**	**535**	**322**	**406**	**744**	**2,007**
	2011	114	140	239	239	732
Change in value of existing entitlements[2]	**2012**	**306**	**214**	**338**	**338**	**1,196**
	2011	(18)	14	38	38	72
Total	**2012**	**841**	**536**	**744**	**1,082**	**3,203**
	2011	96	154	277	277	804

[1] The newly earned entitlements are derived from the 2009, 2010, 2011 and 2012 tranches of the Aspire program because this compensation was or is being earned over three- or four-year periods. They are stated at their pro-rated fair values in 2012 and 2011, respectively.
[2] This line shows the change in the value of the entitlements already earned in 2010 and 2011 (2011: 2009 and 2010).

Provisions of €3,793 thousand (2011: €1,651 thousand) were established for the entitlements of the currently serving members of the Board of Management under the Aspire program.

Pension entitlements

The pension service cost recognized for the members of the Board of Management in 2012 according to the German Commercial Code was €1,861 thousand (2011: €1,078 thousand), while the current service cost for pension entitlements recognized according to the IFRS was €2,501 thousand (2011: €1,134 thousand).

The service costs and the settlement or present value of the pension obligations attributable to the individual members of the Board of Management are shown in the following table.

The difference between the pension service cost according to the German Commercial Code and the current service cost for pension entitlements according to the IFRS arises from the difference in the valuation principles used in calculating the settlement value of the pension obligation according to the German Commercial Code and its present value according to the IFRS.

Pension Entitlements (German Commercial Code and IFRS) [Table 3.34]

	German Commercial Code				IFRS			
	Pension service cost [1]		Settlement value of pension obligation on December 31		Current service cost for pension entitlements		Present value of defined benefit obligation on December 31	
	2011	2012	2011	2012	2011	2012	2011	2012
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Dr. Marijn Dekkers	522	561	3,225	4,354	550	637	3,664	6,282
Werner Baumann	119	1,056	2,973	4,379	128	1,600	3,484	6,888
Prof. Dr. Wolfgang Plischke	211	5	6,999	7,512	220	0	7,574	9,556
Dr. Richard Pott	226	239	6,902	8,074	236	264	7,617	10,722
Total	**1,078**	**1,861**	**20,099**	**24,319**	**1,134**	**2,501**	**22,339**	**33,448**

[1] including company contribution to Bayer-Pensionskasse VVaG

Pension payments to former members of the Board of Management and their surviving dependents amounted to €12,673 thousand (2011: €13,069 thousand). The defined benefit obligation for former members of the Board of Management and their surviving dependents amounted to €149,746 thousand (2011: €134,179 thousand).

The aggregate compensation according to the IFRS is shown in the following table:

Board of Management Compensation according to IFRS [Table 3.35]

	2011	2012
	€ thousand	€ thousand
Fixed salary	3,139	3,394
Compensation in kind and other benefits	257	147
Total short-term non-performance-related compensation	**3,396**	**3,541**
Short-term performance-related cash compensation	3,379	4,247
Total short-term compensation	**6,775**	**7,788**
Stock-based compensation (virtual Bayer shares) earned in the respective year	3,445	4,299
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	(278)	3,136
Stock-based compensation (Aspire) earned in the respective year	732	2,007
Change in value of existing entitlements to stock-based compensation (Aspire)	72	1,196
Total stock-based compensation (long-term incentive)	**3,971**	**10,638**
Current service cost for pension entitlements earned in the respective year	1,134	2,501
Total long-term compensation	**5,105**	**13,139**
Aggregate compensation (IFRS)	**11,880**	**20,927**

13.2.2 Compensation of the Supervisory Board

The Supervisory Board is compensated according to the relevant provisions of the Articles of Incorporation, which were amended effective April 28, 2012 by resolution of the Annual Stockholders' Meeting held on April 27, 2012.

The compensation for 2012 is determined for the period through April 27 according to the previous provisions and from April 28 according to the amended provisions. The compensation for 2013 and thereafter will be determined solely according to the amended provisions of the Articles of Incorporation.

SUPERVISORY BOARD COMPENSATION SYSTEM EFFECTIVE APRIL 28, 2012

The members of the Supervisory Board receive fixed annual compensation of €120,000 plus reimbursement of their expenses.

In accordance with the recommendations of the German Corporate Governance Code, additional compensation is paid to the Chairman and Vice Chairman of the Supervisory Board and for chairing and membership of committees. The Chairman of the Supervisory Board receives fixed annual compensation of €360,000, the Vice Chairman €240,000. These amounts also cover membership and chairmanship of committees. The other members receive additional compensation for committee membership. The chairman of the Audit Committee receives an additional €120,000, the other members of the Audit Committee €60,000 each. The chairmen of the remaining committees receive €60,000 each, the other members of those committees €30,000 each. No additional compensation is paid for membership of the Nominations Committee. A Supervisory Board member who is a member of more than two committees receives compensation only for the two committees with the highest compensation. If changes are made to the Supervisory Board and/or its committees during the year, members receive compensation on a pro-rated basis. The members of the Supervisory Board also receive an attendance fee of €1,000 each time they personally attend a meeting of the Supervisory Board or a committee. The attendance fee is limited to €1,000 per day.

In connection with the change in the Supervisory Board compensation system decided by the 2012 Annual Stockholders' Meeting, the members holding office effective April 28, 2012 have given a voluntary pledge that they will each purchase Bayer shares for 25% of their fixed compensation, including any compensation for committee membership (before taxes), and hold these shares for as long as they remain members of the Supervisory Board. This does not apply to members who transfer at least 85% of their fixed compensation to the Hans Böckler Foundation in accordance with the rules of the German Trade Union Confederation or whose service or employment contract with a company requires them to transfer such compensation to that company. If less than 85% of the fixed compensation is transferred, the voluntary pledge applies to the portion not transferred. By voluntarily pledging to invest in and hold Bayer shares, the Supervisory Board members reinforce their interest in the long-term, sustainable success of the company. With respect to the fiscal year 2012, the voluntary pledge applies to the fixed compensation paid for the period from April 28, 2012.

SUPERVISORY BOARD COMPENSATION SYSTEM UNTIL APRIL 27, 2012

Until April 27, 2012, the compensation of the Supervisory Board was based on the relevant provisions of the Articles of Incorporation decided by the Annual Stockholders' Meeting on April 29, 2005. Each member of the Supervisory Board received fixed annual compensation of €60,000 plus reimbursement of their expenses and a variable annual compensation component. The variable component was based on corporate performance in terms of the gross cash flow reported in the consolidated financial statements of the Bayer Group for the respective fiscal year. The members of the Supervisory Board received €2,000 for every €50 million or part thereof by which the gross cash flow exceeded €3.1 billion, but the variable component for each member could not exceed €30,000.

In accordance with the recommendations of the German Corporate Governance Code, additional compensation was paid to the Chairman and Vice Chairman of the Supervisory Board and for chairing and membership of committees. The Chairman of the Supervisory Board received three times the basic compensation, while the Vice Chairman received one-and-a-half times the basic compensation. Members of the Supervisory Board who were also members of a committee received an additional one quarter of the amount, with those chairing a committee receiving a further quarter. However, no member of the Supervisory Board received total compensation exceeding three times the basic compensation. It

Committee. If changes were made to the Supervisory Board or its committees during the fiscal year, members received compensation on a pro-rated basis.

COMPENSATION OF THE SUPERVISORY BOARD IN 2012

The following table shows the components of each Supervisory Board member's compensation for 2012.

Compensation of the Members of the Supervisory Board of Bayer AG in 2012 [Table 3.36]

	Fixed Compensation		Attendance Fee		Variable Compensation		Compensation for Committee Membership*		Total	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand	€ thousand
Members of the Supervisory Board as of December 31, 2012										
Dr. Paul Achleitner	60	100	–	2	30	10	23	48	**113**	**160**
Dr. Clemens Börsig	60	100	–	3	30	10	–	–	**90**	**113**
André van Broich	–	81	–	3	–	–	–	–	**–**	**84**
Thomas Ebeling	–	81	–	2	–	–	–	–	**–**	**83**
Dr. Thomas Fischer	60	100	–	4	30	10	23	48	**113**	**162**
Peter Hausmann	60	100	–	3	30	10	23	28	**113**	**141**
Reiner Hoffmann	60	100	–	3	30	10	–	41	**90**	**154**
Yüksel Karaaslan	–	81	–	2	–	–	–	–	**–**	**83**
Dr. Klaus Kleinfeld	60	100	–	1	30	10	–	–	**90**	**111**
Petra Kronen	60	100	–	4	30	10	23	28	**113**	**142**
Dr. Helmut Panke	60	100	–	2	30	10	–	–	**90**	**112**
Sue H. Rataj	–	81	–	2	–	–	–	–	**–**	**83**
Petra Reinbold-Knape	–	81	–	3	–	–	–	–	**–**	**84**
Michael Schmidt-Kiessling	–	81	–	2	–	–	–	–	**–**	**83**
Prof. Dr. Ekkehard D. Schulz	60	100	–	4	30	10	0	41	**90**	**155**
Dr. Klaus Sturany	60	100	–	4	30	10	45	96	**135**	**210**
Werner Wenning (Chairman effective October 1, 2012)	–	90	–	2	–	–	–	–	**–**	**92**
Thomas de Win (Vice Chairman)	90	192	–	4	45	15	45	14	**180**	**225**
Prof. Dr. Ernst-Ludwig Winnacker	60	100	–	2	30	10	–	–	**90**	**112**
Oliver Zühlke	60	100	–	4	30	10	–	20	**90**	**135**
Members who left the Supervisory Board during 2012										
André Aich	60	19	–	–	30	10	–	–	**90**	**29**
Willy Beumann	60	19	–	–	30	10	23	7	**113**	**36**
Prof. Dr. Hans-Olaf Henkel	60	19	–	–	30	10	23	7	**113**	**36**
Hubertus Schmoldt	60	19	–	–	30	10	23	7	**113**	**36**
Dr. Manfred Schneider (Chairman until September 30, 2012)	180	211	–	3	90	29	–	–	**270**	**243**
Roswitha Süsselbeck	60	19	–	–	30	10	–	–	**90**	**29**
Dr. Jürgen Weber	60	19	–	–	30	10	23	7	**113**	**36**

In some cases, the sum of the figures given in this table may not precisely equal the stated totals.
* Further details on the membership of the committees of the Supervisory Board are given under "Further Information," page 286ff.

In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Bayer Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation in 2012 was €670 thousand (2011: €645 thousand).

No compensation was paid or benefits granted to members of the Supervisory Board for personally

the members of the Supervisory Board to cover their personal liability arising from their service on the Supervisory Board.

13.2.3 Further Information

ADVANCES OR LOANS TO MEMBERS OF THE BOARD OF MANAGEMENT OR SUPERVISORY BOARD

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding as of December 31, 2012, nor at any time during 2012 or 2011.

PENSION PAYMENTS TO FORMER MEMBERS OF THE BOARD OF MANAGEMENT OR THEIR SURVIVING DEPENDENTS

We currently pay retired members of the Board of Management a monthly pension equal to a maximum of 80% of the last monthly base salary received while in service. The pensions paid to former members of the Board of Management or their surviving dependents have been reassessed annually since January 1, 2009 and adjusted taking into account the development of consumer prices. These benefits are in addition to any amounts they receive under previous employee pension arrangements. The present value of the pension obligation for former members of the Board of Management and their surviving dependents at the closing date amounted to €149,746 thousand (2011: €134,179 thousand) according to IFRS and €126,424 thousand (2011: €127,078 thousand) according to the German Commercial Code.

14. Employees

Employee Data [Table 3.37]

	Dec. 31,2011	Dec. 31,2012
	FTE	FTE
Employees by region		
Europe	53,600	52,300
North America	15,800	15,300
Asia/Pacific	26,000	26,700
Latin America/Middle East/Africa	16,400	16,200
Employees by corporate function		
Production	47,600	45,700
Marketing and distribution	41,800	42,800
Research and development	13,300	12,900
General administration	9,100	9,100
Total	**111,800**	**110,500**
Trainees	2,500	2,500

	%	%
Proportion of women in senior management	22	23
Proportion of full-time employees with contractually agreed working time not exceeding 48 hours per week	100	100
Proportion of employees with health insurance	94	94
Proportion of employees eligible for a company pension plan or company-financed retirement benefits	69	66
Proportion of employees covered by collective agreements on pay and conditions	54	53

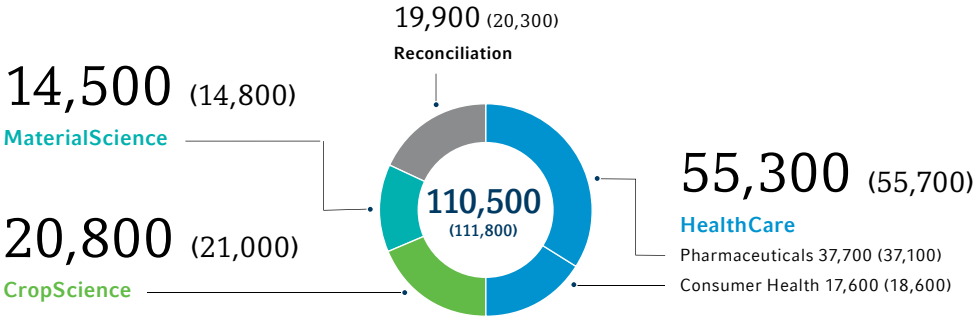
The number of employees on either permanent or fixed-term contracts is stated in full-time equivalents, with part-time employees included on a pro-rated basis in line with their contractual working hours.

EMPLOYEE DATA

On December 31, 2012, the Bayer Group had 110,500 employees worldwide (2011: 111,800). Thus headcount showed a slight decline of 1.2% from the prior year. In Germany we had 34,600 employees (2011: 35,800), making up 31.3% of the Group workforce. HealthCare had 55,300 employees (2011: 55,700), CropScience 20,800 (2011: 21,000), and MaterialScience 14,500 (2011: 14,800). The remaining 19,900 (2011: 20,300) employees worked mainly for the service companies. This figure also includes the 700 (2011: 700) employees of Bayer AG. There were an additional 2,500 (2011: 2,500) trainees on the closing date who are not included in the above numbers.

Personnel expenses rose in 2012 by 5.5% to €9,203 million (2011: €8,726 million), chiefly as a result of currency effects, higher employee bonuses and the regular salary increases.

Employees by Segment [Graphic 3.22]



2011 in parentheses

Our common values:
LIFE

SUSTAINABLE HUMAN RESOURCES POLICY

The Bayer Group's human resources policy is based on its globally valid LIFE values. LIFE stands for Leadership, Integrity, Flexibility and Efficiency. These corporate values commit us to a sustainable human resources policy that is strongly oriented toward performance, development and a high degree of social responsibility. To emphasize their importance as a framework for our employees' behavior, we have permanently integrated the LIFE values into our global performance management system starting in 2012. Now, one of the assessment criteria for all managerial employees is the extent to which they apply the four corporate values in the pursuit of their career goals.

A COMMITTED WORKFORCE

In 2012 we gained important responses and information on the current perception within the company of our strategy, culture and working conditions from the second Group-wide employee survey, in which, once again, more than 70% of our global workforce participated. This survey provides us with periodic feedback from our employees on a number of topics, at the same time benchmarking us against other companies. Based on the survey results, we implement suitable improvement measures and subsequently monitor the progress made. The results again confirmed that the overwhelming majority of the employees identify with our company and its values, and are highly committed to ensuring the company's success.

TALENT MANAGEMENT

Among the main facets of our human resources policy is our Group-wide talent management – the measures and tools to further our employees' professional and personal development. Last year we established the Bayer Global Internal Job Board to better enable our employees to exploit career opportunities and help them actively shape their own career development within the enterprise. Since then, vacant positions up to and including senior management have been advertised internally throughout the Group on this globally accessible job platform. In this way, employees can obtain a clear overview of the internal job market and directly apply for interesting positions across the organization for which they are suitably qualified.

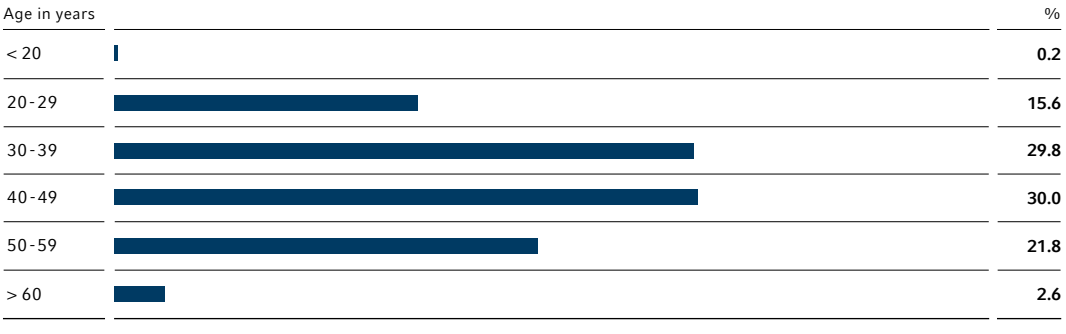
To strengthen the Leadership component of LIFE and promote performance orientation in the company, we have developed an innovative training program that will support our managers in regularly giving their employees candid, constructive feedback on their work and conduct. The goal is to establish a true feedback culture throughout the enterprise that promotes individual strengths, addresses existing deficits and thus enhances employees' personal and professional development over the long term. All members of the Group Leadership Circle – the company's top management level – took the training program at the start, and about 11,000 other managers at all levels followed in 2012.

ADVANCING KNOWLEDGE AND LEADERSHIP SKILLS

Providing training for our employees is fundamental both to talent management and to addressing the consequences of demographic change. In 2012 we maintained our offering of advanced training courses for employees at a high level worldwide and added a number of new features. Our successful "Pegasus" online training program about safety in the workplace was again used more than 36,000 times, and a total of over 28,000 – mainly managerial – employees have now completed our online training program on corporate compliance.

We supplemented our management training programs on strategic corporate development with a new workshop format entitled "Leading Innovation" to promote individual innovative expertise. We added this element in light of the fact that innovation, along with feedback and diversity, is among the central components of Bayer's high-performance culture. In this series of seminars, the members of the Group Leadership Circle and selected other executives receive training in the strategies and methods behind effective innovation management. Also in 2012, we developed a concept for a Group-wide Bayer Academy to be launched in 2013 with the aim of instilling a uniform leadership mindset within the enterprise and systematically improving the existing employee training programs.

Employees by Age Group in % [Graphic 3.23]



EMPLOYEE COMPENSATION AND BENEFITS

Employee bonuses total more than €700 million

An important principle of our human resources policy is to link employees' compensation to their performance and enable them to share in the company's success. Regular benchmarking against competitors and a globally standardized system help us to set base salaries in line with the demands and responsibilities of each position. These salaries are supplemented by performance-related compensation components and extensive ancillary benefits.

More than €700 million is earmarked for variable bonus awards to employees for the year 2012 under the Group-wide short-term incentive (STI) program alone. Included in our extensive range of ancillary benefits in many countries are various stock participation programs that enable employees to purchase Bayer stock at a discount, giving them an additional opportunity to share in the company's economic success. We also offer senior and middle managers throughout the Group uniform stock-based compensation programs known as "Aspire" (see Note [26.6] to the consolidated financial statements) that are based on ambitious earnings targets and – in the case of Group Leadership Circle members – require an appropriate personal investment in Bayer stock.

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [26.6]

SOCIAL PROTECTION AND RESPONSIBILITY

Sustainability and social responsibility are also reflected in our approach to necessary changes and restructuring measures. For example, the workforce reduction initiated in November 2010 was implemented on schedule by the end of 2012 in ways that minimized social hardship. In Germany, which remains the company's largest operational base with 34,600 employees, business-related dismissals are excluded through the end of 2015 for the great majority of employees under an agreement with the employee representatives that was again renewed at the end of 2011. As shown by the employee survey results, our social commitment is acknowledged by the great majority of the employees as an important part of our corporate strategy.

This aspect of our human resources policy includes ensuring a high level of social protection. For example, nearly all Group employees either have statutory health insurance or can obtain health insurance through the company, and 66% have access to a company pension plan. The working conditions for 53% of our employees are governed by collective or company agreements. In China, the establishment of unionized employee councils, begun in 1997, continued in 2012. Eleven companies with a total of over 10,000 employees now have elected councils, which means that more than 90% of our employees in China are now represented by the local union.

Our mission as a responsible employer also includes safeguarding and promoting our employees' health. In all the countries in which we operate, we provide benefits such as medical checkups, on-site medical services, sports opportunities inside and outside the company, and advice and reintegration assistance after recovery from an illness. In this way we also contribute significantly to maintaining long-term employability. This is of growing importance as many countries are raising the retirement age in light of demographic change.

DIVERSITY AND INTERNATIONALITY

A diverse employee structure is crucial to our company's future competitiveness. This applies particularly to our Group-wide management team, because diversity helps us to better understand changing markets and consumer groups, gives us access to a larger talent pool and enables us to benefit from the increased problem-solving and innovation capability that has a proven link with high cultural diversity within the company. We pursue this aim especially in the emerging markets of Asia and Latin America, where we intend to significantly increase the proportion of local people among our managerial employees in the medium term. Of the members of our Group Leadership Circle, in which 23 nationalities are currently represented, some 67% are native to the country in which they work. The Bayer Group currently employs people from 136 countries.

Another focus of our diversity strategy is to improve the balance between women and men, particularly among managerial staff. We view a gender balance spectrum of between 30 to 70 and 70 to 30 as acceptable. We have therefore set ourselves the voluntary target of raising the proportion of women in the five highest management grade levels throughout the Group toward 30% by 2015. In 2012, women accounted for 23% and men for 77% of employees in this management segment. The ratio of female to male employees in the Bayer Group as a whole was 36% to 64%. We are holding workshops aimed at heightening managers' awareness for the benefits of greater employee diversity so that people can pursue a successful career in the company and take advantage of Bayer's executive advancement programs regardless of gender, nationality and other affiliations. The first 24 management teams participated in diversity workshops in 2012.

Bayer Group Workforce Structure 2012 [Table 3.38]

	Women	Men	Total
Senior management	2,000	6,600	8,600
Junior management	8,800	14,900	23,700
Skilled employees	28,800	49,400	78,200
Total	**39,600**	**70,900**	**110,500**
Trainees	800	1,700	2,500

VOCATIONAL TRAINING AND RECRUITING

As an employer, Bayer endeavors to appeal to the best and most talented people worldwide and to retain employees for long periods by providing good development opportunities, a modern working environment and competitive compensation. In 2012 we again succeeded in attracting a total of more than 4,600 academically qualified specialists and managers worldwide. We recruited approximately 700 university graduates in Brazil, more than 600 in India and about 400 each in China, Germany and Russia. In 2012 we hired more than 17,000 new people across all occupations throughout the Group. In addition, we provided some 3,800 challenging occupational internships to talented young students worldwide to give them insight into the variety of career opportunities at Bayer while they are still studying. Such young people often return to us as employees at a later date.

Apart from the hiring of university graduates, our own training programs for young people are among the most important steps we take to guard against a possible shortage of specialists due to demographic change. Once again in 2012, more than 900 young people entered training programs in a total of over 30 occupations at our German sites. In China, we agreed to extend the vocational training collaboration forged in 2002 with the Shanghai Petrochemical Academy for a further ten years. In 2012 some 40 young people embarked on a multi-stage training program that will give them the skills they need for jobs at our sites in China.

15. Sustainability

- Sustainability an integral part of our business strategy
- Occupational safety: clear reduction in injury rate
- Transparent climate reporting: top position in Carbon Disclosure Leadership Index

15.1 Sustainability Strategy

SEE CHAPTER 3

Sustainability – which to us essentially means future viability – forms an integral part of our business strategy (see Chapter 3 "Strategy"). Together with our LIFE values, our mission "Bayer: Science For A Better Life" serves as the foundation for our sustainable activities.

We are convinced that we can only achieve lasting commercial success if we balance economic growth with ecological and social responsibility. In this we are guided by long-term values. To underline this mission, we have committed to international sustainability initiatives such as the U.N. Global Compact and Responsible Care™.

The clear goal of our sustainability strategy is to create business opportunities for our company while at the same time generating economic, ecological and social benefits. This we do on the basis of the following elements:

OUR BUSINESS

INTERNET

The Sustainable Development Report can be found at: www.sustainability.bayer.com

Sustainability is a key element of both the Bayer Group's strategy and the business strategies of the three subgroups and the service companies. Sustainability permeates all aspects of entrepreneurial activity in the Bayer Group, particularly through innovative processes and products. Health care and nutrition are essential to the well-being of society, as are innovative, high-tech materials to help protect the climate and conserve resources. HealthCare, CropScience and MaterialScience each possess an innovative and viable product portfolio that can make significant contributions in this respect. With its exemplary lighthouse projects, the Sustainability Program we initiated in 2009 represents the systematic alignment of our portfolio toward future challenges.

The areas of focus are

- at **HealthCare**: the development of alliances for sustainable health care in the areas of family planning, the control of neglected diseases and the improvement of access to innovative health care as part of the "Access to Medicine" (ATM) strategy

- at **CropScience**: sustainable agriculture that combines economic, ecological and social objectives to provide sufficient high-quality, safe agricultural products, such as through integrated crop solutions – seeds, chemical and biological crop protection and comprehensive customer service. This includes innovative partnerships to boost supplies of high-quality food, such as the food chain partnership programs. There are about 240 of these partnership projects, in which Bayer works together with all players in the food chain. The objective is to increase yields and improve the quality of harvested produce. To this end, Bayer CropScience experts teach farmers about the sustainable cultivation of fruit and vegetables in keeping with good agricultural practice.

- at MaterialScience: high-quality materials and solutions such as those helping to raise energy and resource efficiency within our company and for customers. This includes ongoing development in key areas such as sustainable construction and environmentally friendly mobility, as well as the development of new process technologies such as the oxygen-depolarized cathode.

OUR LICENSE TO OPERATE

Responsible corporate governance and business practices are the foundation of Bayer's business activities – and of its license to operate. Our focus is on acting responsibly in the areas of corporate compliance (see Chapter 13.1 "Declaration on Corporate Governance"); human resources policy (see Chapter 14 "Employees"); product stewardship, occupational health, environmental protection and safety (see Chapter 15.3 "Environment, Safety and Climate Protection"); and supplier management (see Chapter 9 "Procurement and Production"). These aspects are set out in internal Group regulations to ensure that they form an integral part of our business operations. Such regulations include the Bayer Sustainable Development Policy, which defines our common understanding of sustainability and our Human Rights Position, which also covers working conditions; the Corporate Compliance Policy; our Supplier Code of Conduct; the new Responsible Marketing & Sales Policy; and the revised Directive on Process and Plant Safety.

Our strategy takes into account the expectations of our stakeholders and covers employee relations, the dialogue between industry, academia and politicians, and the Bayer Group's social commitment. We take up external and internal suggestions and the priorities voiced by our stakeholders in order to timely identify the principal fields in which our sustainability strategy should continue evolving.

15.2 Sustainability Management and Governance

Responsibility for steering and aligning our Group-wide sustainability strategy lies with the Group Management Board member for Innovation, Technology and Sustainability and a Group Committee chaired by the Head of Environment & Sustainability in the Corporate Center. This committee identifies and evaluates the sustainability-relevant opportunities and risks for our company, establishes objectives, initiatives, management systems and regulations, and is responsible for monitoring their implementation.

Targets and indicators help us to operationalize our strategy and make it more tangible. To integrate sustainability even more closely into our business activities, we have defined ambitious targets for 2015 along the entire value chain, including our ambitious long-term goals for reducing greenhouse gas emissions. An overview of the targets and the status of their attainment in 2012 is given in the following table.

Sustainability Targets 2015*

[Table 3.39]

	TARGETS FOR 2015	STATUS ON DEC. 31, 2012
MANAGEMENT & CORPORATE GOVERNANCE		
Compliance	Extend compliance training to 100% of all Bayer managers	By the end of 2011, around 90% of all Bayer managers had already completed a compliance training course. For that reason, the focus in 2012 was on new Bayer managers.
Supplier management	Inform all suppliers with purchase-order-relevant volumes about Bayer Supplier Code of Conduct	The Bayer Supplier Code of Conduct is a fundamental element of the supplier selection and evaluation process.
	Assess the sustainability performance of suppliers representing ≥ 75% of the total procurement volume and ≥ 75% of the procurement volume from risk areas	In the evaluation of suppliers' sustainability performance, the clear focus was on improving process quality and efficiency. In the year under review, assessments and audits were initiated with a similar coverage to those of the previous year. In addition, joint evaluations were launched in collaboration with other companies as part of the "Together for Sustainability" initiative.
	Annually audit the sustainability performance of at least 10% of the suppliers from risk areas or at least 15 suppliers	Independent external auditors performed sustainability audits on 17 suppliers.
INNOVATION & PRODUCT STEWARDSHIP		
Research & development	Maintain or increase R&D spending in relation to sales	€3.0 billion spent on R&D (previous year: €2.9 billion) R&D spending in relation to sales 7.6 % (previous year: 8.0%)
Product stewardship	Roll out Global Product Strategy (GPS) in another 10 countries with different languages	GPS was rolled out in 2012 in the format of a new product safety website (formerly BayCare) in another 10 countries and three new languages.
EMPLOYEES		
Diversity	Increase the proportion of female managerial staff to approaching 30%	Proportion in 2012: 23% worldwide (previous year: 22%)
Occupational safety (new target figure)	Reduce the number of occupational injuries with lost workdays to ≤ 0.21 LTRIR**	Reduction in LTRIR to 0.27 (previous year: 0.31)
ECOLOGY		
Climate protection	Reduce specific greenhouse gas emissions*** in the Group by 35% (direct and indirect emissions in relation to manufactured sales volume in t) between 2005 and 2020	Slight increase to 0.98 t (previous year: 0.95 t) CO_2 equivalents per metric ton of manufactured sales volume. Target value based on values defined in 2005: 0.79 t CO_2 equivalents per metric ton of manufactured sales volume.
Emissions	Reduce other relevant emissions (ozone-depleting substances [ODS] –70%, volatile organic compounds [VOC] –50%)	ODS fell by around 0.2% to 16.28 t (previous year: 16.32 t). (Target value based on 2010: 6.2 t.) Specific VOC emissions fell by 5.7% to 0.232 kg/t sales product (previous year: 0.246 kg/t). (Target value based on 2010: 0.1218 kg/t sales product.)
Waste	Reduce specific hazardous waste from production to 2.5% in relation to manufactured sales volume	The specific volume of hazardous waste from production rose to 3.54% (previous year: 3.23%).
Process and plant safety	Implement the Bayer-wide initiative to increase process and plant safety. Systematic process and plant safety training for approx. 26,000**** employees by the end of 2012	A variety of measures (symposia, directives) raised awareness of process and plant safety worldwide. 26,000 employees were given training in 2012.
SOCIAL COMMITMENT		
	Focus our global commitment further on scientific education, fostering talent, cutting-edge research, health care and, in Germany, additionally on recreational, youth and disabled sports	Spending of €49 million (previous year: €54 million). In the selection of projects, the focus was on those countries in which Bayer is represented and on issues that are of relevance to our subgroups and their areas of business.

* unless indicated otherwise

** LTRIR = Lost Time Recordable Incident Rate

*** Specific Group emissions are calculated from the total volume of direct and indirect emissions divided by the manufactured sales volumes of the three subgroups. Quantities attributable to the supply of energy to third parties (non-Bayer companies) are deducted from the direct and indirect emissions. For the Bayer MaterialScience subgroup, only manufactured sales volumes that also form the basis for calculating Bayer MaterialScience-specific emissions are taken into account.

**** prior-year values restated; see Sustainable Development Report 2011, page 63f.

The Bayer Sustainability Program was established in 2009 to more consistently align our businesses toward sustainability criteria and generate innovative solutions that make meaningful contributions to overcoming urgent global challenges. Building on this program, we have progressed with the integration of sustainability into our business strategy in recent years, as the resulting growth opportunities for Bayer worldwide have shown. Our mission "Bayer: Science For A Better Life" points the way by combining the "science" and "better life" components. Based on our innovation capability, we intend to further strengthen the link between economic success and the sustainable alignment of our business activities and tap into the respective future markets.

We will also do greater justice to this relationship in our reporting by merging our Sustainable Development Report with the Annual Report to create an Integrated Annual Report starting with the 2013 reporting period. In this way, we aim to elucidate the interaction between financial, ecological, social and governance factors on the one hand and our long-term corporate success on the other.

The most recent edition of our Sustainable Development Report meets the highest standard (Level A) according to the internationally recognized G3.1 guidelines of the Global Reporting Initiative (GRI). In a progress report issued in line with the "Blueprint for Corporate Sustainability Leadership," we also outline the measures and management systems we have in place to implement the ten principles of the U.N. Global Compact and our accomplishments in this area. The data collection process and the statements made throughout the Sustainable Development Report are subjected to an audit review by an independent audit firm and checked for consistency, appropriateness and credibility.

INTERNET

The current Sustainable Development Report can be found at: HTTP://WWW.SUSTAINABILITY2011.BAYER.COM

15.3 Environment, Safety and Climate Protection

Bayer places great importance on protecting the environment and managing natural resources responsibly. We use our expertise to develop new technologies, optimized processes and innovative products that help protect the environment, nature and the climate.

We regularly review our performance in the health, safety and environment areas on the basis of key performance indicators (KPIs):

Key Performance Indicators [Table 3.40]

Category	Key Performance Indicators for Health, Safety and Environment	2011	2012
Health and Safety	Occupational injuries to Bayer employees with lost workdays (LTRIR)*	0.31	0.27
	Reportable occupational injuries to Bayer employees (RIR)*	0.56	0.49
	Environmental incidents	3	5
	Transportation incidents	7	6
Emissions **	Direct greenhouse gas emissions (CO_2 equivalents in million metric tons)***	4.23	4.24
	Indirect greenhouse gas emissions (CO_2 equivalents in million metric tons)***	3.92	4.12
	Volatile organic compounds (VOC) (thousand metric tons/year)	2.69	2.60
	Total phosphorus in waste water (thousand metric tons/year)	0.08	0.15
	Total nitrogen in waste water (thousand metric tons/year)	0.53	0.70
	Total organic carbon (TOC) (thousand metric tons/year)	1.50	1.42
Waste **	Hazardous waste generated (million metric tons/year)	0.47	0.60
	Hazardous waste landfilled (million metric tons/year)	0.12	0.18
Use of resources **	Water use (million m^3/year)****	411	384
	Primary energy use for generating steam and electricity (petajoules [10^{15} joules]/year)	50.10	49.05
	Secondary energy use for generating steam, electricity and refrigeration (petajoules [10^{15} joules]/year)	34.85	34.14

* (LT) RIR = (Lost Time) Recordable Incident Rate
** Environmental indicators are determined at all production sites.
*** as per Greenhouse Gas Protocol
**** 2011 figure restated. See Sustainable Development Report 2011, page 59

ENVIRONMENT

Material and energy efficiency, along with process and product innovations, are a crucial competitive factor. To manage resources as efficiently as possible, Bayer introduced as part of its Sustainability Program the Resource Efficiency Check developed by Technology Services. We have made major progress with this systematic process analysis over the past three years through selected pilot projects in all three subgroups. Investment projects are under way to realize the identified savings potentials for raw materials, solvents and wastewater. The results from the pilot projects are also channeled into current research and development projects to improve production processes.

SEE TABLE 3.40

Material and energy consumption and emissions are determined mainly by the manufactured sales volume. We use this reference parameter to evaluate energy and resource efficiency. Although manufactured sales volume rose by a further 2.4% in 2012 to 11.2 million metric tons, we succeeded in improving many KPIs (see Table 3.40). The main reason for the drop in primary energy consumption was the stepwise closure of our facility at Institute, West Virginia, United States.

Bayer bases its reporting of greenhouse gas emissions on the international standard of the Greenhouse Gas (GHG) Protocol. We aim to hold total emissions at 2007 levels through 2020 despite growth in production. Total greenhouse gas emissions rose by 2.6% in 2012. Due to the increase in production at one of our sites in China, more energy had to be obtained from the public utility grid, which currently involves higher emission rates. This resulted in a 5.1% increase in Bayer's indirect emissions despite a slight drop in our electricity and steam needs. Direct emissions were held at virtually the previous year's level. The trend toward increasingly energy-efficient production, which decouples energy consumption from production growth, continues even though the exceptional effect described above led to slightly higher greenhouse gas emissions in 2012.

Regarding other direct emissions into the atmosphere, we registered a further reduction in volatile organic compounds (VOC) in 2012, reflecting initial progress with a multi-stage VOC reduction program at our sites in Vapi and Ankleshwar, India.

At certain sites our production activities resulted in considerably higher phosphate and nitrogen levels in wastewater.

Water use at Bayer decreased by 6.6% year on year in 2012. Total organic carbon (TOC) emissions into water were reduced by 5.3%, chiefly as a result of process improvements for wastewater treatment at one of our U.S. sites.

The volume of hazardous waste again considerably exceeded the previous year's figure due to a groundwater and soil remediation project at one of our sites in India. This project was completed earlier than planned at the end of 2012.

In 2012 the number of environmental incidents rose to five. Transport accidents showed a slight decline. In the case of environmental incidents we report even minor product releases, in line with our internal voluntary commitment. For substances with a high hazard potential, we report any quantities exceeding 100 kg. Unfortunately, even our extensive safety precautions and training procedures cannot entirely prevent environmental incidents or traffic accidents from occurring. Any such events are carefully analyzed and evaluated so that adequate steps can be taken to prevent a recurrence.

SAFETY

Preventing accidents and safeguarding employees' health in the workplace is an essential part of our responsibility. Our far-sighted occupational safety and health management also helps to reduce costs by avoiding damage and work disruptions. Our activities in the areas of health, safety, environmental protection and quality (HSEQ) are therefore focused on comprehensive risk management to identify and evaluate potential hazards and on ensuring a healthy work environment.

SEE TABLE 3.40

In 2012 we further lowered both the Lost Time Recordable Incident Rate (LTRIR), which is based on 200,000 employee hours worked and includes illnesses, and the Reportable Incident Rate (RIR) for occupational injuries requiring medical treatment (see Table 3.40). Measures undertaken in the subgroups and service companies made a key contribution here. Unfortunately, two people lost their lives in work-related traffic accidents in 2012.

Bayer's objective is to achieve appropriate, uniform HSEQ standards throughout the Bayer Group and continuously improve them. To meet this goal, the company has established HSEQ management systems in all subgroups and service companies that are based on recognized international standards and are regularly reviewed and updated. In 2012 about 99% of our business activity (in terms of energy consumption) took place at locations that had company-audited HSE management systems in place. More than 89% of this business activity occurred at sites that are certified or externally validated according to recognized international standards such as ISO 14001, EMAS and/or OHSAS 18001. A Group-wide certification masterplan is in place with the aim of raising the proportion of our sites that are covered by internationally recognized standards to at least 80% in terms of energy consumption for both environmental protection and occupational health and safety by 2017. All subgroups and service companies have industry-specific quality management systems such as ISO 9001 or GMP (Good Manufacturing Practice). The subgroups have additional systems and standards that address product-specific requirements. If volume is measured in terms of energy consumption, the degree of coverage with quality management systems was more than 92% Group-wide at the end of 2012.

Bayer launched a Group-wide initiative in 2010 to further improve process and plant safety. The related measures are aimed at further developing the safety culture and standards in our plants and laboratories and optimizing our safety technology. To this end, a global training program has been established. Some 26,000 employees for whom process and plant safety is especially relevant had received training by the end of 2012. The most important principles and organizational structures are set forth in the "Directive on Process and Plant Safety," which also applies Group-wide. In 2012 it was reissued with an appendix containing rules for the safe design and operation of facilities.

Our first priorities are the compatibility of our products, the health and safety of those who use them and protection of the environment. A core element of our sustainability strategy is the thorough evaluation of risks to health or the environment along the entire value chain of a product – from research and development to production. This includes the responsible marketing and use of our products and the management of any resulting waste.

Our efforts in the area of sustainability not only include compliance with statutory regulations, but also a voluntary commitment that goes beyond this. Our product stewardship is based on the precautionary principle as defined by the United Nations and the European Union and on the Global Charter of the voluntary Responsible Care™ initiative of the chemical industry. We also support the Global Product Strategy, which aims to ensure the safe handling of chemical products.

Nearly all products manufactured by Bayer are subject to wide-ranging statutory reporting requirements such as those under the European Union chemicals regulation "REACH." The first 125 substances were registered with the chemicals agency ECHA in 2010, and the second registration phase runs through June 1, 2013. For many of the substances in the second phase, Bayer has again formed registration consortia with competitors in order to share data and avert the need for additional animal studies. Bayer also has a small number of substances subject to the parallel authorization process that began in 2011. We will meet the requirements of the Globally Harmonized System (GHS) for the classification and labeling of chemicals within the deadline.

We firmly believe that product marketing must also be based on sustainable principles. To clearly document, drive forward and more accurately focus our commitment to responsible marketing throughout the Bayer Group, we have summarized these principles in a Group Responsible Marketing & Sales Policy. Parallel to this process, our subgroups have emphasized their commitment to compliant and ethical conduct and the observation of industry-specific requirements in product marketing and have incorporated this commitment into their respective regulations. With this initiative, we are establishing the foundation for the further emphasis of this issue in continuing training measures.

CLIMATE PROTECTION

Bayer's strategy takes climate change into account as an ecological, economic and social challenge. At the heart of the Bayer Climate Program, one of the cornerstones of the Bayer Sustainability Program, are increases in energy efficiency in our own production facilities with the help of new technologies and internationally recognized energy management systems. We also intend that our products themselves contribute to protecting the climate and adapting to climate change.

In 2012 Bayer was again listed in the Carbon Disclosure Leadership Index (CDLI) in recognition of our transparent reporting – this time garnering the maximum 100 points as one of two companies worldwide in all industries. Bayer was also included in the Carbon Performance Leadership Index (CPLI) with an "A" ranking in light of our efforts to reduce carbon dioxide emissions.

We plan to continue systematically along this path. Our ambitious goal for the Bayer Group is to reduce specific greenhouse gas emissions (direct and indirect emissions in relation to the manufactured sales volume in metric tons) by 35% between 2005 and 2020. To achieve this, we aim to reduce specific emissions in our energy-intensive MaterialScience subgroup by 40%, while HealthCare is targeting a decline in absolute emissions of 10% and CropScience of 15%. We provide detailed information on developments in our Sustainable Development Report.

An important way to improve energy efficiency and thus help to reduce greenhouse gas emissions is the energy management system STRUCTese™ (Structured Efficiency System for Energy), which was developed by MaterialScience and is certified to ISO 50001. By the end of 2012, we had introduced the system at 50 energy-intensive production facilities worldwide, with a further eight to follow in 2013. Since 2008, STRUCTese™ has led to global savings of over a million megawatt-hours per year of primary energy and a reduction of more than 300,000 metric tons per year in CO_2 emissions at MaterialScience. In addition, we intend to establish equivalent ISO 50001-certified systems at selected facilities of HealthCare and CropScience in the coming years.

In the field of process innovation, implementation of a novel climate-friendly process for chlorine production that Bayer developed together with partners met with continued success. In a pilot facility that went into operation at the Krefeld site in mid-2011, we produce chlorine using oxygen-depolarized cathode technology with up to 30% less energy consumption than the current standard process requires.

SEE CHAPTER 10

MaterialScience supplies products for two main segments that are important for climate protection – the insulating materials market and the automotive industry (see also Chapter 10 "Products, Distribution and Markets"). One of the uses for our insulating materials is in sustainable construction. Here we have expanded the "EcoCommercial Building" program – a global network of experts led by MaterialScience that offers individual, complete solutions from a single source for new energy-efficient buildings and the renovation of existing buildings.

SEE CHAPTER 11

CropScience, too, is working to help counter the effects of climate change through its research into stress-tolerant and higher-yielding crops (see also Chapter 11 "Research, Development, Innovation"). With experts predicting that climate change will lead to an increase in vector-borne infectious diseases such as malaria, CropScience is also helping to protect people against malaria with its innovative LifeNet™ mosquito nets. The final report of the World Health Organization's "Pesticide Evaluation Scheme" (WHOPES) confirmed that Bayer's nets demonstrate superior efficacy against insects that transmit malaria.

The Bayer Climate Program also uses other approaches, including the Bayer Eco-Fleet program to reduce CO2 emissions caused by company cars, the use of new telecommunications technologies to reduce the need for business travel, and the improvement of energy efficiency in the IT environment (the Green IT program). Between 2007 and 2012 we reduced the average CO2 emissions of our vehicle fleet by 20%. Our goal of boosting energy efficiency in Bayer's data centers by 20% between 2009 and 2012 was exceeded.

15.4 Social Commitment

Bayer's social commitment is an established part of our sustainability strategy and corporate policy. Our funding activities also contribute to a positive business environment.

Bayer's social commitment is reflected in a range of projects in three main fields in many parts of the world, some of which have been ongoing for years. In 2012 Bayer provided some €49 million (2011: €54 million) for this purpose.

€49 million for social initiatives

Expenses for Social Initiatives [Table 3.41]

Main sponsorship areas	2011	2012
	€ million	€ million
Education and research*	10	13
Health and social needs	24	16
Sports and culture	20	20

* Including expenses for "environment and nature" (2011: €2 million; 2012: €2 million), which were reported separately in 2011.

Our funding strategy mainly focuses on projects of high social relevance that meet specific needs in areas related to our business activities, because we aim not only to provide financial support but also to contribute specific technological and economic expertise.

EDUCATION AND RESEARCH

As a research-based company, Bayer depends particularly on recruiting highly trained scientists and on society's acceptance of technology. We therefore place great importance on supporting education and research, especially in the areas of science, technology, medicine and the environment.

The funding programs of the Bayer Science & Education Foundation cover the entire scientific training and career path. In 2012 the foundation approved total funding of about €1.6 million for dedicated school students, innovative school projects, ambitious trainees, exceptional university students, outstanding young scientists and leading researchers.

Support for talented young researchers and leading scientists

In 2012 the foundation added a further 53 teaching projects to its school funding program in the communities near Bayer's German sites, bringing total financial support for such projects to some €480,000. As part of Bayer's support program for college students, trainees and school students, around €240,000 was pledged in scholarships for 56 young people to study abroad.

In 2012 the Bayer Science & Education Foundation again bestowed its Bayer Early Excellence in Science Awards – worth €10,000 each – on three young scientists in the early stages of their careers. The awards were presented, in the biology category, to Dr. Christiane Opitz of the German Cancer Research Center in Heidelberg for her contributions to the better understanding of malignant tumors; in the chemistry category, to Dr. Nuno Maulide of the Max Planck Institute for Carbon Research in Mülheim an der Ruhr for developing new routes to synthesize highly functional small-ring molecules; and, in the materials category, to Dr. Volker Presser of the INM Leibniz Institute for New Materials in Saarbrücken for his research on novel nanomaterials for use in energy storage and transformation technologies.

The Bayer Science & Education Foundation presented the €75,000 Otto Bayer Award 2012 to Professor Benjamin List of the Max Planck Institute for Carbon Research in Mülheim an der Ruhr for his outstanding work in the field of organocatalysis. Professor List's research achievements have helped to create the conditions for efficient processes and resource-conserving, sustainable chemical production.

The €50,000 Bayer Climate Award 2012 went to Professor Markku Kulmala of the University of Helsinki for his groundbreaking research on aerosols. His contributions to climate research include the discovery that aerosols – mixtures of gases and small solid or liquid particles – can lower the Earth's temperature and thus alleviate climate change under certain circumstances.

The international Bayer education initiative "Making Science Make Sense" was again implemented in 14 countries around the world. Bayer employees donate their time to illustrate the fascination and practical importance of science to elementary school students through experiments.

Involving young people in environmental projects

In addition to its sponsorship focus on science and technology, Bayer is also helping to increase environmental knowledge among children and young people through its global partnership with the United Nations Environment Programme (UNEP). For example, in 2012 the company again gave some 50 environmentally committed young people from 19 countries in Latin America, Africa and Asia the opportunity to participate in a week-long study trip to Germany to learn about practical aspects of industrial environmental protection, discuss the issues among themselves and receive support for the implementation of specific environmental projects in their home countries.

HEALTH AND SOCIAL NEEDS

Bayer is globally committed to improving social conditions and health care with the dual aims of promoting stability in the communities near its sites and helping to solve global health challenges.

Supplementing Bayer's economic activities in its core health care field is our "Access to Medicine" (ATM) strategy. As part of this program, we supply medicines free of charge to combat "neglected" tropical diseases affecting about one billion people worldwide. The medicines our company donates to the World Health Organization (WHO) feature on the WHO Essential Drug List. In 2012, Bayer agreed to double its donation of Lampit™ tablets to treat Chagas disease, which is widespread in Latin America, to one million tablets a year for the next five years. We also provided US$300,000 to support logistics and distribution. In addition, Bayer works together with the WHO in the fight against African sleeping sickness, tuberculosis and malaria.

In a joint project with the Chinese government, Bayer supports the provision of medical care to people in the poorer rural areas of western China. Under the slogan "Go West," the company provides continuing education opportunities for general practitioners, equips hospitals and instructs their operators in hospital management. More than 4,500 hospital managers and doctors participated in training programs in 2012. A total of over 11,000 people from 20 provinces have received training as part of this project since its launch in 2007.

The Bayer Cares Foundation, our social needs organization, accepted 44 new charity projects in the communities near the company's German sites into its Volunteering Program in 2012, providing funding of approximately €128,000. As in science, Bayer also aims to drive forward innovations and thus new solutions in the social needs area. The Bayer Cares Foundation therefore gives funding preference to volunteering projects established by employees or other citizens who adopt innovative approaches to improving social conditions at the local level.

In 2012 the foundation presented the €35,000 "Aspirin Social Award" for innovative health care aid and consultancy programs in Germany for the third time.

Bayer donated a total of some US$280,000 to the American Red Cross and the Save the Children Fund for victims of Hurricane Sandy in the northeastern United States. The Bayer Cares Foundation has joined with the aid organization Dawn Relief and UNICEF to launch a long-term reconstruction project in the region of Pakistan affected by the severe floods of 2010. The foundation is providing €100,000 for the construction of some 60 single-family homes, a school and a vocational training center.

SPORTS AND CULTURE

The Bayer Arts & Culture program and our other special-interest clubs have contributed to the attractiveness of our corporate locations for more than a century, benefiting employees and other citizens alike. In 2012, the company provided funding of some €13 million for recreational, youth and disabled sports. Bayer also continued with its "Simply Soccer" integration project in conjunction with the German Soccer Federation (DFB), enabling some 200 girls and boys with mental or learning disabilities to regularly play soccer in 13 ordinary clubs.

16. Events After the End of the Reporting Period

HEALTHCARE

In January 2013, we acquired the U.S. animal health business of Teva Pharmaceutical Industries Ltd., United States. The purchase price is comprised of a one-time payment of €40 million plus potential milestone payments totaling up to €69 million that are linked to the successful and timely achievement of manufacturing and sales targets.

CROPSCIENCE

In January 2013, CropScience acquired PROPHYTA Biologischer Pflanzenschutz GmbH, a leading supplier of biological crop protection products headquartered in Malchow, Germany. The acquisition comprises ultra-modern production and formulation plants along with research and development facilities. This acquisition strengthens the successful fruit and vegetables business of CropScience. The provisional purchase price was €25 million.

17. Future Perspectives

17.1 Opportunity and Risk Report

- No risks that could endanger the company's existence
- Opportunity and risk management an integral part of corporate governance
- Clearly structured risk management organization

17.1.1 Opportunity and Risk Management

Business operations necessarily involve opportunities and risks. Effective management of opportunities and risks is therefore a key factor in sustainably safeguarding a company's value.

Managing opportunities and risks is an integral part of the corporate governance system in place throughout the Bayer Group, not the task of one particular organizational unit. Key elements of the opportunity and risk management system are the planning and controlling process, Group regulations and the reporting system.

The opportunity and risk situation is evaluated both qualitatively and quantitatively in determining the strategies of the strategic business entities and the regions. At regular conferences held to discuss business performance, the results of this evaluation are updated to form the basis for setting risk management objectives and taking the necessary actions.

Opportunity management in the Bayer Group is based on the detailed observation and analysis of individual markets and the early recognition and evaluation of trends from which opportunities can be identified. Macroeconomic, industry-specific, regional and local trends are taken into account. It is the task of the subgroups and strategic business entities to make use of strategic opportunities arising in their respective markets. The strategic framework necessary for them to do this is set, and the necessary financing and liquidity ensured, at the Group level. Opportunity-based projects involving more than one subgroup are centrally coordinated and accounted for.

The principles behind the Bayer Group's risk management system are contained in a directive published on the Group-wide intranet. The directive describes the relevant statutory requirements and how Bayer identifies risks at an early stage, communicates them and takes steps to mitigate them.

Risk management at the Group level is assigned to the Chief Financial Officer. The subgroups, service companies and the units of the holding company have nominated persons responsible for risk management at the upper managerial level as well as risk management coordinators to ensure that an effective system for the early identification of risks is implemented and maintained. The annual risk report to the Supervisory Board covers the risk management system, legal risks, compliance issues, the reports by Corporate Auditing and the report on the internal control system. The members of the Group Leadership Circle have unrestricted access to the risk database, which is mapped to the management information system.

The effectiveness of the risk management system is monitored by Corporate Auditing at regular intervals. Corporate Auditing adopts a risk-based approach to audit planning. In addition, the external auditor assesses the early warning system as part of the annual financial statements audit and informs the Group Management Board and the Supervisory Board of the findings. These findings are taken into account as part of the continuous enhancement of our risk management system. The risk management system is monitored by the Supervisory Board, especially its Audit Committee.

17.1.2 Internal Control and Risk Management System for (Group) Accounting and Financial Reporting

(report pursuant to Sections 289 Paragraph 5 and 315 Paragraph 2 No. 5 of the German Commercial Code)

Bayer has an internal control and risk management system in place under which appropriate structures and processes for (Group) accounting and financial reporting are defined and implemented throughout the organization. This system is designed to guarantee timely, uniform and accurate accounting for all business processes and transactions. It ensures compliance with statutory regulations, accounting and financial reporting standards and the internal accounting directive, which is binding upon all the companies included in the consolidated financial statements. The relevance and consequences for the consolidated financial statements of any amendments to laws, accounting or financial reporting standards or other pronouncements are continually analyzed, and the Group directives and systems are updated accordingly.

Apart from defined control mechanisms such as system-based and manual reconciliation processes, the fundamental principles of the internal control system include the separation of functions and compliance with directives and operating procedures. The accounting and financial reporting process for the Bayer Group is managed by the Group Accounting and Controlling department of Bayer AG.

The Group companies prepare their financial statements either locally or using the Group's shared service centers and transmit them with the aid of a data model that is standardized throughout the Group and based on the Group accounting directive. The Group companies are responsible for their compliance with the directives and procedures applicable throughout the Group and for the proper and timely operation of their accounting-related processes and systems. The employees involved in the accounting and financial reporting process for the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG receive regular training, and the Group companies are supported by headquarters personnel throughout the process. As part of the process, measures are implemented that are designed to ensure the regulatory compliance of the consolidated financial statements. These measures serve to identify and evaluate risks, and to limit and monitor any risks that may be identified. For example, material new contractual relationships are systematically tracked and analyzed.

The consolidated financial statements are prepared centrally on the basis of the data supplied by the included subsidiaries. The consolidation, certain reconciliation operations and monitoring of the related time schedules and procedures are performed by a dedicated Group Financial Statements department. System-based controls are monitored by personnel and supplemented by manual inspection. At least one additional check by a second person is carried out at every level. Defined approval procedures must be observed at all stages in the accounting process. There is also a dedicated unit, separate from the financial statements preparation process, for clarification of specific accounting-related questions or particularly complex issues.

Bayer's internal control system for financial reporting is based on the framework issued by COSO (Committee of the Sponsoring Organizations of the Treadway Commission). For IT processes, the COBIT (Control Objectives for Information and Related Technology) framework is used accordingly. The standards for the mandatory Group-wide internal control system (ICS) were derived from these frameworks, defined centrally and implemented by the Group companies. The management of each company is responsible for the implementation and oversight of the local ICS. All ICS-relevant business processes, together with the related risks and controls, are documented in a uniform and audit-proof manner in a Group-wide system and clearly mapped in a central IT system at the Group level.

Bayer's Corporate Audit Department performs an independent and objective audit function designed to verify compliance with statutory, regulatory and contractual requirements. Its activities are aimed at ensuring that resources and corporate assets are adequately protected and that significant financial and other operating information is accurate, reliable, and furnished in a timely manner. Corporate Auditing supports the company in achieving its goals by objectively evaluating the efficiency and effectiveness of management and monitoring processes and of the risk management and internal control systems, and helping to improve them based on a systematic and targeted approach. Its scope extends to all the company's activities worldwide.

Bayer AG has a standardized, Group-wide procedure to monitor the efficacy of the accounting-related internal control system. This procedure is aligned to potential misreporting risks in the consolidated financial statements.

The appraisal of the effectiveness of the accounting-related ICS is based on a cascaded self-assessment system that starts with the persons directly involved in the process, then involves the principal responsible managers and ends with the Group Management Board. Corporate Auditing performs an independent review of random samples of these self-assessments.

The Group Management Board has examined the effectiveness of the internal control system for accounting and financial reporting. The examination confirmed the functionality of this internal control system for fiscal 2012. The effectiveness of the internal control system is monitored by the Audit Committee of the Bayer AG Supervisory Board in compliance with the German Accounting Law Modernization Act, which came into effect in May 2009. However, it should be noted that an internal control system, irrespective of its design, cannot provide absolute assurance that material misstatements in the accounting will be avoided or identified.

17.1.3 Opportunities

As an international enterprise, Bayer is subject to a wide variety of developments in the national and international markets in which its three subgroups operate. Different potential risks and opportunities arise within the existing operational framework based on the business development described in this report and the company's overall situation.

We aim to take maximum advantage of the opportunities occurring in our various fields of activity. We continuously evaluate potential additional opportunities in all areas as an integral part of our strategy, which is set forth in detail in Chapter 3 "Strategy."

SEE CHAPTER 3

Further opportunities derive from the company's innovation capability, and we are working continuously to find new products and improve existing ones. These activities are presented in detail in Chapter 11 "Research, Development, Innovation."

SEE CHAPTER 11

We also believe that the emerging markets hold further potential. More information on our business in these countries is provided in Chapter 6.5 "Business Development in the Emerging Markets."

SEE CHAPTER 6.5

Various risks described in the following – particularly financial risks – are counterbalanced by the opportunities that could result from positive trends.

17.1.4 Risks

RISK EXPOSURE

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous risks. We have purchased insurance coverage – where it is available on economically acceptable terms – in order to minimize related financial impacts. The level of this coverage is continuously re-examined.

Significant risks for the Bayer Group are outlined in the following sections. The order in which the risks are listed is not intended to imply any assessment as to the likelihood of their materialization or the extent of any resulting damages.

LEGAL RISKS

The Bayer Group is exposed to numerous legal risks from legal disputes or proceedings to which we are currently a party or which could arise in the future, particularly in the areas of product liability, competition and antitrust law, patent disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot be predicted. It is therefore possible that legal or regulatory judgments could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings.

Investigations into possible legal or regulatory violations, such as potential infringements of antitrust law or certain marketing and/or distribution methods, may result in civil or criminal sanctions – including substantial monetary penalties – and/or other adverse financial consequences, may harm Bayer's reputation and ultimately detract from the company's success.

To ensure that laws and regulations are observed, Bayer has established a global corporate compliance program that forms an integral part of its corporate culture. This program comprises the Corporate Compliance Policy, which serves as the framework for the observance of laws and regulations, a dedicated compliance organization and intensive communication and training activities.

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [32]

Legal proceedings currently considered to involve material risks are described in Note [32] to the consolidated financial statements.

INDUSTRY-SPECIFIC RISKS

Pharmaceutical product prices are subject to regulatory controls in many markets. Some governments intervene directly in setting prices. In addition, in some markets major purchasers of pharmaceutical products have the economic power to exert substantial pressure on prices. Price controls, as well as price pressure from generic manufacturers as a result of government reimbursement systems favoring less expensive generic pharmaceuticals over brand-name products, diminish earnings from our pharmaceutical products and could potentially render the market introduction of a new product unprofitable. We expect the current extent of regulatory controls and market pressures on pricing to persist or increase. Changes regarding governmental price controls in our key markets are continuously monitored. If necessary, we adjust our business plans depending on the extent of such price controls.

The Group's sales and earnings are affected by the economic circumstances of our customers. At MaterialScience, a downturn in the business cycle would result in weak demand and overcapacities, putting pressure on prices and heightening competition.

Active portfolio management

The early identification of trends in the economic or regulatory environment and active portfolio management are important elements of our business management. Our analyses of the global economy and forecasts of medium-term economic development are documented in detail on a quarterly basis and used to support operational business planning. However, even our detailed analyses may not ensure that a massive economic downturn can be predicted.

SEE CHAPTER 17.2

For a summary forecast, see Chapter 17.2 "Economic Outlook."

Where it appears strategically advantageous, we may acquire a company or part of a company and combine it with our existing business. The amount of goodwill and other intangible assets reflected in the Bayer Group's consolidated statement of financial position has increased significantly in recent years as a result of acquisitions. Failure to successfully integrate a newly acquired business or unexpectedly high integration costs could jeopardize the achievement of quantitative or qualitative targets, such as synergies, and adversely impact earnings.

The integration processes associated with our acquisitions are steered by integration teams. Suitably experienced personnel resources are provided to support the integration processes. Teams of experts also provide support for any divestiture projects.

PRODUCT DEVELOPMENT RISKS

The Bayer Group's competitive position, sales and earnings depend significantly on the development of commercially viable new products and production technologies. We therefore devote substantial resources to research and development. Because of the lengthy development processes, technological challenges, regulatory requirements and intense competition, we cannot assure that all of the products we will develop in the future or are currently developing will actually reach the market and achieve commercial success as scheduled or at all.

In addition, adverse effects of our products that may be discovered after regulatory approval or registration despite thorough prior testing may lead to a partial or complete withdrawal from the market, due either to regulatory actions or our voluntary decision to stop marketing a product. Also litigations and associated claims for damages due to negative effects of our products may materially diminish our earnings.

To ensure an effective and efficient use of resources in research and development, the Bayer Group has implemented an organizational structure and process organization comprising functional departments, working groups and reporting systems that monitor development projects.

REGULATORY RISKS

Our life-science businesses, in particular, are subject to strict regulatory regimes relating to the testing, manufacturing and marketing of many of our products. In some countries, regulatory controls have become increasingly demanding. We expect this trend to continue. Increasing regulatory requirements, such as those governing clinical or (eco-)toxicological studies, may increase product development costs and/or delay product (re-)registration.

To counter risks arising from legal or other requirements, we make our decisions and engineer our business processes on the basis of comprehensive legal advice provided both by our own experts and by acknowledged external specialists. Projects have been initiated to coordinate the implementation of new regulatory controls and mitigate any negative implications for the business.

PATENT RISKS

A large proportion of our products, mainly in our life-science businesses, is protected by patents. We are currently involved in lawsuits to enforce patent rights in our products. Generic manufacturers and others attempt to contest patents prior to their expiration. Sometimes a generic version of a product may even be launched "at-risk" prior to the issuance of a final patent decision.

When a patent defense is unsuccessful, or if one of our patents expires, our prices are likely to come under pressure because of increased competition from generic products entering the market. Details of related litigation are provided as part of the description of legal risks in Note [32] to the consolidated financial statements.

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [32]

In some areas of activity we may also be required to defend ourselves against charges that products infringe patent or proprietary rights of third parties. This could impede or even halt the development or manufacturing of certain products or require us to pay monetary damages or royalties to third parties.

Our life-science businesses, in particular, have a comprehensive product life-cycle management system in place. In addition, our patents department, in conjunction with the relevant functional departments, regularly reviews the patent situation. Potential infringements of our patents by other companies are carefully monitored so that legal action can be taken if necessary.

PRODUCTION, PROCUREMENT MARKET AND ENVIRONMENTAL RISKS

Production capacities at some of our manufacturing facilities could be adversely affected by events such as technical failures, natural disasters, regulatory rulings or disruptions to supplies of key raw materials or intermediates, as in the case of dependence on a single source for critical materials. This applies particularly to our biotech products because of the highly complex manufacturing processes. If in such cases we are unable to meet demand by shifting sufficient production to other plants or drawing on our inventories, we may suffer declines in sales revenues.

Long-term supply contracts to hedge against raw material price risks

The supply of strategically important raw materials is ensured wherever possible through long-term contracts and/or by purchasing from multiple suppliers. Furthermore, all stages of our production processes and our material inputs are continuously monitored by the respective expert function within the company.

The manufacturing of chemical products is subject to risks associated with the production, filling, storage and transportation of raw materials, products and waste. These risks may result in personal injury, property damage, environmental contamination, production stoppages, business interruptions and liability for compensation payments.

The presence of unintended trace amounts of genetically modified organisms in agricultural products and/or foodstuffs cannot be completely excluded.

We address product and environmental risks by adopting suitable quality assurance measures. An integrated quality, health, environmental and safety management system ensures process stability. Our sustainability strategy and sustainability management are driven by our commitment to the international Responsible Care and Global Product Strategy initiatives of the chemical industry.

PERSONNEL RISKS

Skilled and dedicated employees are essential for the success of our growth-oriented corporate strategy. Particularly in the emerging markets of Asia and Latin America, the number of people with the technical and language skills needed for demanding positions in an international industrial enterprise remains relatively small. Accordingly, those who possess these skills are highly sought after by companies operating there. Should we be unable to recruit a sufficient number of employees in these countries and retain them for the long term, this could have considerable adverse consequences for our future success.

We are addressing this risk by globally positioning the company as an attractive employer and carrying out comprehensive personnel marketing to convince our target groups of the benefits of working for Bayer. These include competitive compensation with performance-related components as well as an extensive range of training and development opportunities. We also pursue a diversity-based human resources policy to tap the full potential of the employment market.

IT RISKS

Business and production processes and the internal and external communications of the Bayer Group are increasingly dependent on information technology systems. Major disruptions or failure of global or regional business systems may result in loss of data and/or impairment of business and production processes.

The foundations for a continuous and sustainable IT risk management system have been laid by establishing a comprehensive organization, issuing regulations that define the relevant roles and responsibilities, and implementing a periodic reporting system. For this purpose a committee has been established at the Group level to resolve upon the basic strategy, architecture and IT security features, which are implemented accordingly by the subgroups and service companies in consultation with this central organization. Technical precautions such as data recovery and continuity plans have been established together with our internal IT service provider to address this risk.

RISK TO PENSION OBLIGATIONS FROM CAPITAL MARKET DEVELOPMENTS

The Bayer Group has obligations to current and former employees related to pensions and other post-employment benefits. Changes in relevant valuation parameters such as interest rates, mortality and rates of increases in compensation may raise the present value of our pension obligations. This may lead to increased costs for pension plans or diminish equity due to actuarial losses being recognized directly in equity. A large proportion of our pension and other post-employment benefit obligations is covered by plan assets including fixed-income securities, shares, real estate and other investments. Declining or even negative returns on these investments may adversely affect the future fair value of plan assets. This in turn may diminish equity, and/or it may necessitate additional contributions by the company. Further details are given in Note [25] to the consolidated financial statements.

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [25]

We address the risk of market-related fluctuations in the fair value of our plan assets through prudent strategic investment, and we constantly monitor investment risks in regard to our global pension obligations.

FINANCIAL RISKS

Management of financial and commodity price risks

As a global enterprise, Bayer is exposed in the normal course of business to credit risks, liquidity risks and various market price risks that may materially affect its net assets, financial position and results of operations.

In line with company policy, a central risk management process is applied to identify and analyze the market price risks arising from operating activities and from the resulting financing requirements. Our use of derivatives to eliminate or minimize these risks relates almost entirely to hedge recorded or forecasted transactions and is subject to strict internal controls based on centrally defined mechanisms and uniform guidelines. The derivatives used are mainly over-the-counter instruments, particularly forward exchange contracts, foreign currency options, interest-rate swaps, cross-currency interest-rate swaps, commodity swaps and commodity option contracts concluded with banks. We set counterparty limits for such banks depending on their creditworthiness. Further details on derivatives are given in Note [30.3].

SEE CONSOLIDATED FINANCIAL STATEMENTS
Note [30.3]

The following section explains the various risks associated with financial instruments and how these risks are managed.

Credit and country risks

Credit risks arise from the possibility of the value of receivables or other financial assets being impaired because counterparties cannot meet their payment or other performance obligations. The Bayer Group does not conclude master netting arrangements with its customers for non-derivative financial instruments; here, the total of financial assets represents the maximum credit risk exposure. In the case of derivatives, positive and negative market values may be netted under certain conditions.

To effectively manage the credit risks from trade receivables, Bayer has put in place a standardized risk management system, which is the subject of a Group directive. Each invoicing company has appointed a responsible credit manager who regularly analyzes customers' creditworthiness. Some of these receivables are collateralized, and the collateral is used according to local conditions. It includes credit insurance, advance payments, letters of credit and guarantees. Reservation of title is generally

agreed with our customers. Credit limits are set for all customers. All credit limits for debtors where total exposure is €10 million or more are evaluated by local credit management and submitted to the Group's Central Financial Risk Committee.

To minimize credit risks, financial transactions are only conducted within predefined exposure limits and with banks and other partners that have investment-grade ratings. All risk limits are based on methodical models. Adherence to the risk limits is continuously monitored.

Country risks relating to trade receivables, intra-Group loans and the creditworthiness of the countries themselves are continuously monitored, systematically evaluated and centrally managed.

Liquidity risks

Liquidity risks – those arising from the possibility of not being able to meet current or future payment obligations because insufficient cash is available – are centrally managed in the Bayer Group. The Group holds sufficient liquidity to ensure the fulfillment of all planned payment obligations at maturity. Payment obligations result both from operating cash flows and from changes in current financial liabilities. In addition, a reserve is maintained for unbudgeted shortfalls in cash receipts or unexpected disbursements. For this purpose, budget deviation analyses are performed on the basis of historical time series, adjusted for variations in business structure. The liquidity reserve is then determined which, with a defined probability, will cover a negative deviation from budgeted cash flows. The size of this reserve is regularly reviewed and adjusted as necessary to current conditions. Liquid assets are held mainly in the form of overnight and term deposits. Credit facilities also exist with banks. These include, in particular, a €3.5 billion syndicated credit facility, which is undrawn.

We intend to service the bonds maturing in 2013 out of liquidity and free operating cash flow.

Market risks

Market risks relate to the possibility that the fair value or future cash flows of financial instruments may fluctuate due to variations in market prices. They include currency, interest-rate and other price risks, especially commodity price risks. We estimate market price risks by performing a sensitivity analysis for each category (such as interest rates) on the basis of hypothetical changes in risk variables (such as interest curves) to determine the potential effects of market price fluctuations on equity and earnings. We employ sensitivity analysis because it provides readily understandable risk estimates using straightforward assumptions (for example, an increase in interest rates). We continue to use market information and additional analytics to manage our risk exposure and mitigate the limitations of our sensitivity analysis. The assumptions and parameters used in sensitivity analysis are regularly reviewed. The sensitivity analyses provided in the following sections relate to the hypothetical loss in cash flows from the derivative and non-derivative financial instruments that we held as of December 31, 2012 and December 31, 2011. The range of sensitivities that we chose for these analyses reflects our view of the changes in foreign exchange rates, commodity prices and interest rates that are reasonably possible over a one-year period.

Currency risks

Since the Bayer Group conducts a significant portion of its operations outside the eurozone, fluctuations in currency exchange rates can materially affect earnings. Currency risks from financial instruments exist with respect to receivables, payables, cash and cash equivalents that are not denominated in a company's functional currency. In the Bayer Group these risks are particularly significant for the U.S. dollar, the Japanese yen, the Canadian dollar and the Chinese renminbi.

Recorded operating items, receivables and payables in liquid foreign currencies are normally fully hedged.

The anticipated foreign currency exposure from forecasted transactions in the next twelve months is hedged on a basis agreed between the Group Management Board, the central finance department and the operating units. A significant proportion of contractual and foreseeable currency risks is hedged, mainly through forward exchange contracts and currency options.

We applied a hypothetical adverse scenario in which the euro simultaneously depreciates by 10% against all other currencies compared with the year-end exchange rates. Under this scenario the estimated hypothetical loss of cash flows from derivative and non-derivative financial instruments as of December 31, 2012 would be €256 million (December 31, 2011: €305 million). Of this €256 million, €127 million is related to the U.S. dollar, €32 million to the Japanese yen, €31 million to the Canadian dollar and €66 million to other currencies. Of the €256 million estimated hypothetical loss of cash flow, €296 million results from derivatives used to hedge anticipated exposure from planned sales denominated in foreign currencies. Such transactions qualify for hedge accounting, and the respective changes in value are recognized in equity under other comprehensive income (OCI). The offsetting position of €40 million is primarily attributable to account balances in foreign currencies.

Interest-rate risks

The Bayer Group's interest-rate risks arise primarily from financial assets and liabilities with maturities exceeding one year. In the case of fixed-rate financial instruments, such as fixed-rate bonds, the risk of fluctuations in capital-market interest rates results in a fair-value risk because the fair values fluctuate as a function of interest rates. In the case of floating-rate instruments, a cash flow risk exists because interest payments could increase or decrease in the future.

Interest-rate risks are managed via the duration set by the Board of Management, which implicitly also includes the ratio of fixed-rate to floating-rate debt. The duration is subject to regular review. Derivatives – mainly interest-rate swaps, cross-currency interest-rate swaps and interest options – are employed to preserve the target structure of the portfolio.

Financial liabilities including derivatives as of December 31, 2012 amounted to €9,528 million (December 31, 2011: €11,663 million). The sensitivity analysis was performed on the basis of our floating-rate debt position at year end 2012, taking into account the interest rates relevant to our liabilities in all principal currencies. A hypothetical increase of 100 basis points, or 1 percentage point, in these interest rates (assuming constant currency exchange rates) as of January 1, 2012 would have raised our interest expense for the year ended December 31, 2012 by €46 million (2011 based on our floating-rate debt position at year end 2011: €68 million).

Other price risks (especially commodity price risks)

The Bayer Group requires significant quantities of petrochemical feedstocks and energy for its various production processes. The prices of these inputs may fluctuate considerably depending on market conditions. As in the past, there may be times when it is not possible for us to pass on increased raw material costs to customers through price adjustments. This applies particularly to our MaterialScience business.

We have addressed this risk by concluding long-term contracts with multiple suppliers. The procurement departments of the subgroups are responsible for managing commodity price risks on the basis of centrally set requirements and limits. The operation of our production facilities requires large amounts of energy, mostly in the form of electricity and steam. To minimize our exposure to energy price fluctuations, we aim for a balanced diversification of fuels for steam production and a mix of external procurement and captive production for power generation.

ASSESSMENT OF THE OVERALL RISK SITUATION

Compared with the previous year, the overall risk situation did not change significantly in the reporting period. The overall risk assessment is based on a consolidated view of all significant individual risks. At present, no potential risks have been identified that either individually or in combination could endanger the continued existence of the Bayer Group.

17.2 Economic Outlook

GLOBAL ECONOMY

Economic Outlook [Table 3.42]

	Growth in 2012*	Growth forecast for 2013*
World	+2.6 %	+2.5 %
European Union	−0.2 %	+0.1 %
of which Germany	+0.7 %	+0.4 %
United States	+2.3 %	+1.7 %
Emerging markets**	+4.9 %	+5.1 %

* real GDP growth, source: Global Insight; source for Germany: Federal Ministry of Economics and Technology
** including about 50 countries defined by Global Insight as emerging markets in line with the World Bank

The world economy is predicted to grow at about the same pace in 2013 as in the prior year. The key factors hampering economic growth remain the economic crisis in Europe and the high level of government debt in a number of industrialized countries, especially the United States. However, there are initial signs that the global economic weakness may gradually be overcome during the year provided that the situation in Europe, in particular, continues to stabilize. The monetary policy of the principal central banks will likely remain strongly expansionary and thus help to underpin the economy.

We expect the economic situation in the European Union to slightly improve during the year, with economic performance in the southern European countries showing a smaller decline than in 2012. We anticipate slower growth in Germany in a persistently difficult environment.

In the United States, while the tense budget situation and the need for fiscal consolidation are likely to present further obstacles to growth, the increase in employment that began in the middle of last year is likely to spur consumer demand. There are also indications of an enduring, if slow, improvement in the real estate market.

We continue to anticipate relatively strong growth in the emerging markets. However, economic expansion in those countries as a whole will probably only slightly outpace the previous year, as many countries remain highly dependent on exports and will therefore suffer from the low demand in many of the industrialized countries. China and Brazil especially are likely to show stronger growth again in 2013 following a relatively weak prior year.

Economic Outlook for the Subgroups [Table 3.43]

	Growth in 2012*	Growth forecast for 2013*
HealthCare		
Pharmaceuticals market	+3 %	+3 %
Consumer care market	+4 %	+3 %
Medical care market	+1 %	−1 %
Animal health market	+4 %	+5 %
CropScience		
Seeds and crop protection markets	> 10 %	≥ 5 %
MaterialScience (main customer industries)		
Automotive	+6%	+2%
Construction	+3%	+4%
Electrical/electronics	+3%	+5%
Furniture	+4%	+5%

* Bayer's estimate; excluding pharmaceuticals market, source: IMS Health. Copyright 2013. All rights reserved; currency-adjusted; 2012 data provisional

HEALTHCARE

We expect growth in the **pharmaceuticals market** to continue to be driven by emerging markets such as China, Brazil, India and Russia. The United States and a number of European countries are likely to experience declines as a result of persistently restrictive health system policies.

The **consumer care market** should expand at a slightly slower rate than in 2012, with higher rates of growth in the emerging markets being offset by slower expansion in Europe and the United States. We anticipate that the **medical care market** will shrink slightly in 2013 compared to 2012. Here we expect the diabetes care market to decline, while the market for contrast agents and medical equipment is likely to expand. We believe the **animal health market** as a whole will grow in 2013 at a rate comparable to prior years despite weaker economic prospects.

CROPSCIENCE

After the global **seed and crop protection market** grew by more than 10% in 2012 for the second straight year, we expect the market environment in the coming year to remain positive, though volatile. The predicted relatively low inventories worldwide for most plant-based agricultural commodities – combined with steadily rising demand for food and feed products – portend comparably high price levels at least for the first half of 2013. Farmers' economic prospects are therefore likely to remain positive, spurring investment in high-value seed and crop protection products. The global seed and crop protection market should benefit from this. We nevertheless anticipate a lower growth rate of at least 5% in 2013.

As last year, we expect Latin America to see the strongest market growth. With soybean cultivation steadily increasing and now accounting for nearly 40% of the region's acreage, this is the principal crop driving growth in the seed and crop protection market. In Asia/Pacific, too, we expect agricultural production to go on increasing, albeit at markedly slower rates than in Latin America. The trend in this region will mainly depend on cereals and rice along with specialty crops such as fruit and vegetables. We believe Eastern Europe and parts of Africa also have above-average growth potential, though starting from a relatively low level. In the industrialized regions of the northern hemisphere, however, we expect markets to expand much more slowly than in 2012.

MATERIALSCIENCE

For 2013, we predict continued stable growth in the principal **global customer industries** for MaterialScience, albeit with risks attached. The ongoing eurozone crisis, in particular, could continue to dampen consumer behavior. By contrast, a gradual market recovery in the United States would likely have a positive effect. We believe the economic growth momentum will persist in Asia.

For the **automotive industry**, we expect significantly slower growth than in 2012. Sales in Western Europe are currently expected to decline, with demand in nearly all countries remaining weak and automotive production in Germany heavily dependent on export markets. On the other hand, car sales in India and China are likely to go on increasing rapidly. Stable growth is expected in the other regions.

The global **construction industry** is likely to expand in 2013 at the same rate as in the previous year, with a growing recovery in construction investment in the United States but continuing weak development in Western Europe. The pace of growth in the most important Asian countries should remain relatively constant.

Robust growth is also forecasted for the **electrical/electronics sector** in 2013. Demand is likely to rise in nearly all segments of this industry, especially in the BRIC countries (Brazil, Russia, India and China). In Western Europe, however, we believe growth will be considerably weaker due to the continuing debt crisis and consumer reticence.

We expect the trend in the global **furniture industry** to vary by region again in 2013. While consumer reticence in Western Europe could affect production in Eastern Europe and Asia, we anticipate that the gradual recovery in the North American market will continue. For Asia, we expect the region's overseas markets to progressively recover, with domestic demand continuing to stabilize.

17.3 Sales and Earnings Forecast

The following forecasts are based on the business development described in this report, taking into account the potential risks and opportunities.

BAYER GROUP

We expect Group sales to increase in 2013 by 4%–5% on a currency- and portfolio-adjusted basis, to approximately €41 billion. We plan to increase EBITDA before special items by a mid-single-digit percentage and core earnings per share (calculated as explained in Chapter 7.3 "Core Earnings Per Share") by a high-single-digit percentage.

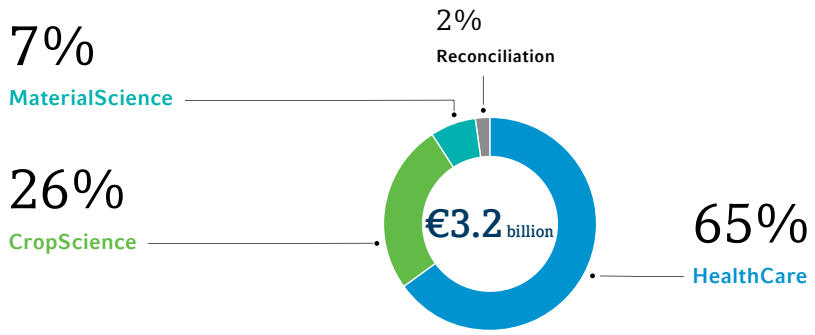
	2013 forecast
Group sales*	4% – 5% increase to approx. €41 billion
EBITDA before special items	Mid-single-digit percentage increase
Core earnings per share	High-single-digit percentage increase

* currency- and portfolio-adjusted

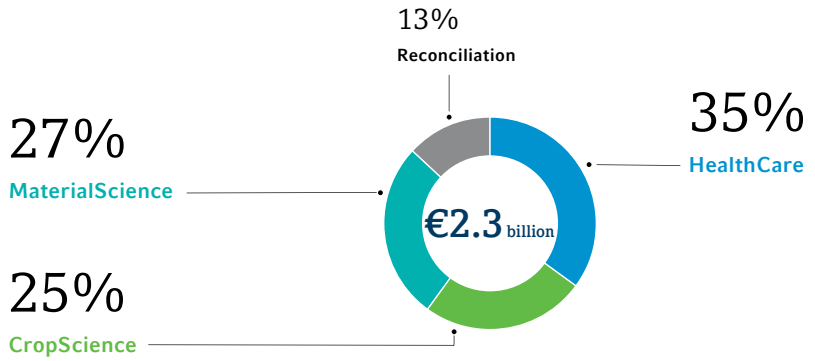
The currency assumptions made for 2013 are approximately in line with the average exchange rates seen in the fourth quarter of 2012, including a rate of US$1.29 to the euro. Compared to the currency parities prevailing in 2012, these assumptions adversely affect the planned level of EBITDA before special items for 2013. A 1% appreciation (depreciation) of the euro against all other currencies would lead to a decrease (increase) of around €270 million in sales and about €70 million in EBITDA before special items.

Following the successful completion of the major restructuring projects in 2012, we will continue to execute efficiency enhancement measures, for which we expect to incur special charges of roughly €200 million in 2013.

Research and Development Expenses by Subgroup 2013 [Graphic 3.24]



Capital Expenditures by Subgroup 2013 [Graphic 3.25]



We expect our research and development expenses to rise to approximately €3.2 billion. We have planned capital expenditures of about €1.9 billion for property, plant and equipment and €0.4 billion for intangible assets. Depreciation and amortization are estimated at about €2.6 billion, including €1.3 billion in amortization of intangible assets.

We anticipate a financial result of approximately minus €0.8 billion, taking into account the adjustments resulting from IAS 19 (revised). We are planning for an effective tax rate of about 26%. Regarding our financial position, we expect net financial debt to be below €7.0 billion at the end of 2013.

For 2014 we plan to continue growing Bayer Group sales, EBITDA before special items and core earnings per share, with our new pharmaceutical products also contributing to this expansion. We plan to maintain about the same level of capital expenditures for property, plant and equipment and intangible assets as in 2013. With research and development expenses also expected to be at the 2013 level, we intend to continue developing our projects as described in Chapter 11 "Research, Development, Innovation." We anticipate a further decline in net financial debt in 2014.

HEALTHCARE

HealthCare's ongoing priority for 2013 is to successfully commercialize the new pharmaceutical products. We expect sales to advance by a mid-single-digit percentage on a currency- and portfolio-adjusted basis to approximately €19 billion, with an increase in EBITDA before special items. Earnings growth is likely to be restrained by negative currency effects and higher marketing expenses for the launch of our new products. We aim to slightly improve the EBITDA margin before special items.

In the Pharmaceuticals segment we expect sales to move ahead in 2013 by a mid-single-digit percentage on a currency- and portfolio-adjusted basis to about €11 billion. We plan to increase EBITDA before special items and slightly improve the EBITDA margin before special items.

We predict that sales of the Consumer Health segment will grow by a mid-single-digit percentage on a currency- and portfolio-adjusted basis to around €8 billion. We expect EBITDA before special items to increase and the EBITDA margin before special items to be level with the prior year.

In 2014 we plan to accelerate growth momentum in both HealthCare segments, raising both sales and EBITDA before special items.

CROPSCIENCE

For 2013 we predict continued favorable market conditions for our CropScience business.

We expect business growth to outpace the market, with sales advancing by a high-single-digit percentage on a currency- and portfolio-adjusted basis toward €9 billion. We also plan to raise EBITDA before special items by a high-single-digit percentage.

In 2014 we plan to further increase sales and EBITDA before special items.

MATERIALSCIENCE

For 2013 we are planning a slight increase in sales on a currency- and portfolio-adjusted basis to about €12 billion. We intend to further improve EBITDA before special items.

For the first quarter of 2013 we anticipate a currency- and portfolio-adjusted sales increase compared to the preceding quarter. We expect EBITDA before special items to come in at the level of the preceding quarter.

Assuming a positive market environment, we plan to increase sales and EBITDA before special items again in 2014.

BAYER AG

As the holding company for the Bayer Group, Bayer AG derives most of its income from its subsidiaries. The earnings of the major subsidiaries in Germany are transferred directly to Bayer AG under profit and loss transfer agreements. The earnings of Bayer AG are therefore expected to reflect the positive business development anticipated in the Bayer Group. A concerted dividend policy within the Group ensures the availability of sufficient distributable income. We anticipate that the net interest position will show a further improvement in light of the decline in financial debt and the continuing low level of interest rates. Based on these factors, we expect Bayer AG to report a distributable profit that will again enable our stockholders to appropriately participate in the Bayer Group's earnings.

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Bayer Group Consolidated Income Statements

[Table 4.1]

	Note	2011	2012
		€ million	€ million
Net sales	[7]	**36,528**	**39,760**
Cost of goods sold		(17,975)	(19,059)
Gross profit		**18,553**	**20,701**
Selling expenses	[8]	(8,958)	(9,987)
Research and development expenses	[9]	(2,932)	(3,013)
General administration expenses		(1,713)	(1,866)
Other operating income	[10]	859	1,083
Other operating expenses	[11]	(1,660)	(2,958)
EBIT*		**4,149**	**3,960**
Equity-method loss	[13.1]	(45)	(46)
Financial income		586	502
Financial expenses		(1,327)	(1,168)
Financial result	[13]	**(786)**	**(712)**
Income before income taxes		**3,363**	**3,248**
Income taxes	[14]	(891)	(752)
Income after taxes		**2,472**	**2,496**
of which attributable to non-controlling interest	[15]	2	50
of which attributable to Bayer AG stockholders (net income)		**2,470**	**2,446**
		€	€
Earnings per share	[16]		
Basic		2.99	2.96
Diluted		2.99	2.96

* EBIT: Earnings before financial result and taxes

Bayer Group Consolidated Statements of Comprehensive Income

[Table 4.2]

	Note	2011	2012
		€ million	€ million
Income after taxes		**2,472**	**2,496**
of which attributable to non-controlling interest	*[15]*	*2*	*50*
of which attributable to Bayer AG stockholders		*2,470*	*2,446*
Changes in fair values of derivatives designated as cash flow hedges	[30.3]	(57)	38
Reclassified to profit or loss		(3)	148
Income taxes	[14]	17	(53)
Change in the amount recognized outside profit or loss (cash flow hedges)		**(43)**	**133**
Changes in fair values of available-for-sale financial assets	[20]	4	30
Reclassified to profit or loss		(1)	-
Income taxes	[14]	(1)	(12)
Change in the amount recognized outside profit or loss (available-for-sale financial assets)		**2**	**18**
Changes in actuarial gains/losses on defined benefit obligations for pensions and other post-employment benefits and effects of the asset ceiling	[25]	(1,241)	(2,849)
Income taxes	[14]	416	876
Change in the amount recognized outside profit or loss (actuarial gains/losses on defined benefit obligations for pensions and other post-employment benefits and effects of the asset ceiling)		**(825)**	**(1,973)**
Changes in exchange differences recognized on translation of operations outside the eurozone		11	(16)
Reclassified to profit or loss		-	-
Change in the amount recognized outside profit or loss (exchange differences)		**11**	**(16)**
Effects of changes in scope of consolidation		**-**	**5**
Total changes recognized outside profit or loss		**(855)**	**(1,833)**
of which attributable to non-controlling interest		*(5)*	*(4)*
of which attributable to Bayer AG stockholders		*(850)*	*(1,829)*
Total comprehensive income		**1,617**	**663**
of which attributable to non-controlling interest		*(3)*	*46*
of which attributable to Bayer AG stockholders		*1,620*	*617*

Bayer Group Consolidated Statements of Financial Position

[Table 4.3]

	Note	Dec. 31, 2011	Dec. 31, 2012
		€ million	€ million
Noncurrent assets			
Goodwill	[17]	9,160	9,293
Other intangible assets	[17]	10,295	9,464
Property, plant and equipment	[18]	9,823	9,863
Investments accounted for using the equity method	[19]	319	284
Other financial assets	[20]	1,364	1,324
Other receivables	[23]	425	541
Deferred taxes	[14]	1,311	1,581
		32,697	**32,350**
Current assets			
Inventories	[21]	6,368	6,980
Trade accounts receivable	[22]	7,061	7,431
Other financial assets	[20]	2,784	856
Other receivables	[23]	1,628	1,648
Claims for income tax refunds		373	376
Cash and cash equivalents		1,770	1,695
Assets held for sale	[6.3]	84	-
		20,068	**18,986**
Total assets		**52,765**	**51,336**
Equity	[24]		
Capital stock of Bayer AG		2,117	2,117
Capital reserves of Bayer AG		6,167	6,167
Other reserves		10,928	10,185
Equity attributable to Bayer AG stockholders		**19,212**	**18,469**
Equity attributable to non-controlling interest		59	100
		19,271	**18,569**
Noncurrent liabilities			
Provisions for pensions and other post-employment benefits	[25]	7,870	9,373
Other provisions	[26]	1,649	1,986
Financial liabilities	[27]	7,995	6,962
Other liabilities	[29]	474	409
Deferred taxes	[14]	2,116	938
		20,104	**19,668**
Current liabilities			
Other provisions	[26]	4,218	4,844
Financial liabilities	[27]	3,684	2,570
Trade accounts payable	[28]	3,779	4,295
Income tax liabilities	[26.1]	76	72
Other liabilities	[29]	1,630	1,318
Liabilities directly related to assets held for sale	[6.3]	3	-
		13,390	**13,099**
Total equity and liabilities		**52,765**	**51,336**

Bayer Group Consolidated Statements of Cash Flows

[Table 4.4]

	Note	2011	2012
		€ million	€ million
Income after taxes		2,472	2,496
Income taxes		891	752
Financial result		786	712
Income taxes paid or accrued		(1,067)	(1,560)
Depreciation, amortization and impairments		2,769	2,960
Change in pension provisions		(504)	(542)
(Gains) losses on retirements of noncurrent assets		(175)	(219)
Gross cash flow		**5,172**	**4,599**
Decrease (increase) in inventories		(241)	(674)
Decrease (increase) in trade accounts receivable		(389)	(452)
(Decrease) increase in trade accounts payable		245	539
Changes in other working capital, other non-cash items		273	520
Net cash provided by (used in) operating activities (net cash flow)	[33]	**5,060**	**4,532**
Cash outflows for additions to property, plant, equipment and intangible assets		(1,615)	(1,929)
Cash inflows from sales of property, plant, equipment and other assets		275	227
Cash inflows from divestitures		173	178
Cash inflows from (outflows for) noncurrent financial assets		(211)	(261)
Cash outflows for acquisitions less acquired cash		(261)	(466)
Interest and dividends received		75	104
Cash inflows from (outflows for) current financial assets		(2,326)	1,329
Net cash provided by (used in) investing activities	[34]	**(3,890)**	**(818)**
Dividend payments and withholding tax on dividends		(1,242)	(1,366)
Issuances of debt		1,001	1,309
Retirements of debt		(1,398)	(3,254)
Interest paid including interest rate swaps		(902)	(793)
Interest received from interest rate swaps		332	325
Cash outflows for the purchase of additional interests in subsidiaries		(4)	(3)
Net cash provided by (used in) financing activities	[35]	**(2,213)**	**(3,782)**
Change in cash and cash equivalents due to business activities		**(1,043)**	**(68)**
Cash and cash equivalents at beginning of year		**2,840**	**1,770**
Change in cash and cash equivalents due to changes in scope of consolidation		-	-
Change in cash and cash equivalents due to exchange rate movements		(27)	(7)
Cash and cash equivalents at end of year		**1,770**	**1,695**

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Bayer Group Consolidated Statements of Changes in Equity

							Accumulated Other C
	Capital stock of Bayer AG	Capital reserves of Bayer AG	Retained earnings incl. net income	Exchange differences		Fair-value measurement of securities	Cash flow hedges
	€ million	€ million	€ million	€ million		€ million	€ million
Dec. 31, 2010	**2,117**	**6,167**	**12,345**	**(1,827)**		**22**	**(38)**
Equity transactions with owners							
Capital increase/decrease							
Dividend payments			(1,240)				
Other changes			5				
Changes recognized outside profit or loss***			(825)	16		2	(43
Net income 2011			2,470				
Dec. 31, 2011	**2,117**	**6,167**	**12,755**	**(1,811)**		**24**	**(81**
Equity transactions with owners							
Capital increase/decrease							
Dividend payments			(1,364)				
Other changes			9				
Changes recognized outside profit or loss***			(1,968)	(12)		18	133
Net income 2012			2,446				
Dec. 31, 2012	**2,117**	**6,167**	**11,878**	**(1,823)**		**42**	**52**

* excluding actuarial gains and losses, which are reflected in "Retained earnings incl. net income" as "Changes recognized outside profit or loss"
** OCI = other comprehensive income
*** net of tax

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Notes to the Consolidated Financial Statements of the Bayer Group

1. Key data by segment and region

Key Data by Segment

	HealthCare					CropScience		Materi
	Pharmaceuticals		Consumer Health			CropScience		Materi
	2011	2012	2011	2012		2011	2012	2011
	€ million	€ million	€ million	€ million		€ million	€ million	€ million
Net sales (external)	9,949	10,803	7,220	7,809		7,255	8,383	10,832
Change	−0.1%	+8.6%	+3.8%	+8.2%		+6.2%	+15.5%	+6.7%
Currency-adjusted change	+0.6%	+4.2%	+5.7%	+3.6%		+8.5%	+11.7%	+8.4%
Intersegment sales	84	383	3	6		28	30	66
Net sales (total)	10,033	11,186	7,223	7,815		7,283	8,413	10,898
Other operating income	268	259	70	80		253	429	106
EBIT	1,897	1,075	1,294	1,079		562	1,539	633
EBIT before special items	2,042	2,298	1,325	1,438		1,168	1,526	589
EBITDA before special items	2,972	3,203	1,730	1,865		1,654	2,008	1,171
Gross cash flow	1,992	1,294	1,262	1,320		900	1,320	939
Capital invested	14,459	13,552	8,260	8,040		8,554	9,834	10,337
CFROI *	12.0%	7.5%	13.9%	14.6%		8.2%	12.4%	6.0%
Net cash flow	2,077	2,260	1,280	1,283		691	899	775
Equity-method income (loss)	-	-	-	-		-	-	(45)
Equity-method investments	-	-	-	-		-	-	319
Assets	16,891	16,433	9,046	8,577		9,525	10,364	8,461
Capital expenditures	439	527	172	257		315	365	574
Additions to noncurrent assets from acquisitions	-	-	142	24		65	518	-
Depreciation, amortization and impairments	898	918	413	743		653	494	582
of which impairment losses	54	23	13	320		174	15	5
of which impairment loss reversals	(37)	(16)	-	-		-	(5)	-
Liabilities	4,512	6,035	2,278	2,438		4,080	4,412	2,396
Research and development expenses	1,556	1,566	392	396		723	782	237
Number of employees (as of Dec. 31)	37,100	37,700	18,600	17,600		21,000	20,800	14,800

* 2011 figures restated, see Management Report, Chapter 7.4

Key Data by Region

	Europe		North America			Asia/Pacific		Latin Africa/Mi
	2011	2012	2011	2012		2011	2012	2011

2. General information

The consolidated financial statements of the Bayer Group as of December 31, 2012, were prepared by Bayer Aktiengesellschaft (Bayer AG) according to the International Financial Reporting Standards (IFRS), issued by the International Accounting Standards Board (IASB), London, and the interpretations of the IFRS Interpretations Committee, both as endorsed by the European Union and in effect at the end of the reporting period. The applicable further requirements of Section 315a of the German Commercial Code were also taken into account.

Bayer AG is a global enterprise based in Germany. Its registered office is at Kaiser-Wilhelm-Allee 1, 51368 Leverkusen. Its material business activities in the fields of health care, agriculture and high-tech materials take place in the HealthCare, CropScience and MaterialScience subgroups, respectively. The activities of the various segments are outlined in Note [5].

SEE NOTE [5]

A declaration concerning the German Corporate Governance Code has been issued pursuant to Section 161 of the German Stock Corporation Act and made available to stockholders.

The Board of Management of Bayer AG prepared the consolidated financial statements of the Bayer Group on February 18, 2013. They were discussed by the Audit Committee of the Supervisory Board of Bayer AG at its meeting on February 25, 2013, and approved by the Supervisory Board at its plenary meeting on February 26, 2013.

In the income statement and statement of comprehensive income, statement of financial position, statement of cash flows and statement of changes in equity, certain items are combined for the sake of clarity. These are explained in the Notes. The income statement is prepared using the cost-of-sales method. Assets and liabilities are classified by maturity. They are regarded as current if they mature within one year or within the normal business cycle of the company or the Group, or are held for sale. The normal business cycle is defined for this purpose as beginning with the procurement of the resources necessary for the production process and ending with the receipt of cash or cash equivalents as consideration for the sale of the goods or services produced in that process. Inventories and trade accounts receivable and payable are always presented as current items. Deferred tax assets and liabilities and pension provisions are always presented as noncurrent items.

The consolidated financial statements of the Bayer Group are drawn up in euros. Amounts are stated in millions of euros (€ million) except where otherwise indicated. In some cases, the sum of the figures given in this report may not precisely equal the stated totals and percentages may not be exact due to rounding.

The financial statements of the individual consolidated companies are prepared as of the closing date of the Group financial statements.

3. Effects of new financial reporting standards

FINANCIAL REPORTING STANDARDS APPLIED FOR THE FIRST TIME IN 2012

The following new financial reporting standards, amendments to existing standards and related interpretations, applied for the first time in 2012, had no impact, or no material impact, on the presentation of the Group financial position or results of operations, or on earnings per share.

In October 2010, the IASB published amendments to IFRS 7 (Financial Instruments: Disclosures). These amendments require additional disclosures about the transfer of financial assets, partly to provide insight into the possible effects of any risks remaining with the transferring entity. Additional disclosures are also required if a disproportionately large number of such transactions is undertaken around the end of a reporting period or if rights and/or obligations in respect of a derecognized financial asset are retained or assumed under the terms of the transaction.

In December 2010, the IASB issued an amendment to IAS 12 (Income Taxes). This amendment introduces a rebuttable presumption that the carrying amount of an asset will normally be recovered through sale rather than use. The change is particularly relevant for the calculation of deferred taxes in countries where the income tax rates on gains from divestments differ from those on regular rental income, for example. In this connection, SIC-21 (Income Taxes – Recovery of Revalued Non-Depreciable Assets) was integrated into IAS 12 (Income Taxes), except where it relates to real estate held as investment property.

PUBLISHED FINANCIAL REPORTING STANDARDS THAT HAVE NOT YET BEEN APPLIED

The IASB and the IFRS Interpretations Committee have issued the following standards, amendments to standards, and interpretations whose application was not yet mandatory for the 2012 fiscal year and is conditional upon their endorsement by the European Union.

In November 2009, the IASB issued IFRS 9 (Financial Instruments), containing rules for the classification and measurement of financial assets. In October 2010, it issued new requirements for the classification and measurement of financial liabilities, incorporating them into IFRS 9. This marks the completion of the first part of a three-part project to completely revise the accounting treatment of financial instruments. The new standard defines two instead of four measurement categories for financial assets, with classification to be based partly on the company's business model and partly on the characteristics of the contractual cash flows from the respective financial asset. In the case of equity investments that are not held for trading, an entity may irrevocably opt at initial recognition to recognize future changes in their fair value in other comprehensive income. An amendment passed in December 2011 postponed the mandatory effective date of IFRS 9 to annual periods beginning on or after January 1, 2015. The disclosure requirements under IFRS 7 concerning the first-time application of IFRS 9 were amended at the same time. These new standards and amendments have not yet been endorsed by the European Union. The changes will not have a material impact on the presentation of the Group's financial position or results of operations.

In May 2011, the IASB published IFRS 10 (Consolidated Financial Statements), IFRS 11 (Joint Arrangements) and IFRS 12 (Disclosure of Interests in Other Entities). It also published amendments to two existing standards, IAS 27 (Separate Financial Statements) and IAS 28 (Investments in Associates and Joint Ventures). Application of these standards and amendments is generally mandatory for annual periods beginning on or after January 1, 2013. In the European Union, application of these standards and amendments is mandatory for annual periods beginning on or after January 1, 2014, at the latest.

IFRS 10 (Consolidated Financial Statements) introduces principles for the preparation and presentation of consolidated financial statements by companies that control one or more other companies. The standard defines a uniformly applicable control concept for all company forms to serve as the basis for determining whether subsidiaries are to be fully consolidated. The control concept is specified in extensive application guidance that is to be followed in ascertaining whether a control relationship exists. IFRS 10 entirely replaces the corresponding provisions of IAS 27 (Consolidated and Separate Financial Statements) and SIC-12 (Consolidation – Special Purpose Entities). Changes in the scope of consolidation resulting from the application of IFRS 10 will not have any material effects.

IFRS 11 (Joint Arrangements) prescribes the accounting for joint arrangements over which control is shared with a third party. The accounting treatment is determined by the rights and obligations arising from the joint arrangement rather than by the legal form as in the past. Joint arrangements are classified as either joint operations or joint ventures. Each party to a joint operation must in future recognize its shares of the operation's assets, liabilities, revenues and expenses in accordance with its rights and obligations. Investments in joint ventures are to be accounted for using the equity method. IFRS 11 supersedes IAS 31 (Interests in Joint Ventures) and SIC-13 (Jointly Controlled Entities – Non-Monetary Contributions by Venturers). In this connection the IASB simultaneously amended IAS 28 (Investments in Associates and Joint Ventures) to address the accounting for investments in both associates and joint ventures using the equity method. Overall, the changes are likely to improve the net result from investments accounted for using the equity method by between €25 million and €35 million while at the same time reducing EBIT.

IFRS 12 (Disclosure of Interests in Other Entities) prescribes the information to be disclosed in the notes to the financial statements about interests in subsidiaries, associates, joint arrangements and non-consolidated structured entities. The objective of these disclosures is to enable the users of an entity's financial statements to understand the nature of its interests in other entities, the risks associated with them, and the effects of the interests on its financial position and results of operations.

In light of the amendments made by IFRS 10 (Consolidated Financial Statements) and IFRS 12 (Disclosure of Interests in Other Entities), the IASB published a revised version of IAS 27 (Separate Financial Statements), which is now devoted entirely to accounting for interests in subsidiaries, associates and joint ventures in IFRS separate financial statements.

In May 2011, the IASB also published IFRS 13 (Fair Value Measurement), which provides a uniform definition of fair value and how it is measured and specifies the related disclosures to be provided in the notes. This standard prescribes how – rather than when – an asset or liability is to be measured at fair value, the fair value being defined as the price that would be received to sell an asset or paid to transfer a liability. IFRS 13 is to be applied for annual periods beginning on or after January 1, 2013 and must first be applied prospectively. The application of IFRS 13 will not have a material impact on the presentation of the Group's financial position or results of operations.

In June 2011, the IASB published amendments to IAS 1 (Presentation of Financial Statements), requiring items recognized outside profit or loss in other comprehensive income to be grouped according to whether or not they may subsequently become reclassifiable to profit or loss. The amendments are to be applied for annual periods beginning on or after July 1, 2012.

Also in June 2011, the IASB published amendments to IAS 19 (Employee Benefits). This abolishes the "corridor method," which the Bayer Group ceased to use in 2005, of deferring the recognition of actuarial gains and losses in profit or loss until subsequent periods. In future, the net liability under defined benefit plans must be recognized in full and the change in the liability due to actuarial gains and losses must be recognized directly in other comprehensive income. In addition, the net interest cost for defined benefit plans is to be calculated on the basis of the net liability, which is the difference between the defined benefit obligation and the fair value of plan assets. This means that the interest rate used to calculate the expected return on plan assets to be recognized in profit or loss no longer has to be estimated but must correspond to the discount rate for the pension obligations. The criteria for determining this interest rate will be the same as before. In the event of future plan amendments, the deferred recognition of past service cost will no longer be permitted, and it will have to be recognized immediately in profit or loss. There are also changes to the recognition and measurement principles for employee termination benefits. The amendments are to be applied for annual periods beginning on or after January 1, 2013.

The impact of these amendments in the year of first-time application cannot be fully quantified, since it also depends partly on the extent of future plan amendments and new pre-retirement part-time working agreements entered into in the future. In light of the expected return of about €620 million on plan

assets in 2013, application of the net interest approach according to IAS 19 (revised 2011) will diminish the financial result in 2013 by roughly €170 million and at the same time give rise to deferred tax income of about €55 million. The actuarial losses and the related deferred taxes to be recognized outside profit or loss in 2013 will be reduced by the same amount. Past service cost, which in future must be directly recognized in profit or loss, is not expected to materially affect earnings in 2013. The cost of top-up payments to employees under pre-retirement part-time working agreements is expensed over the period in which they are earned. They are expected to diminish EBIT by €6 million and income after taxes by €4 million in 2013 and at the same time give rise to deferred tax income of €2 million. The application of IAS 19 (revised 2011) as of January 1, 2013, will also reduce the provisions for obligations under pre-retirement part-time working agreements by approximately €8 million, increase deferred tax liabilities by about €2 million and increase equity by roughly €6 million.

The interpretation IFRIC 20 (Stripping Costs in the Production Phase of a Surface Mine) was published in October 2011. IFRIC 20 addresses the recognition along with the initial and subsequent measurement of assets created by the removal of waste materials ("stripping") in the production phase of surface mining activity to gain access to ore and mineral deposits. The interpretation comes into effect for annual periods beginning on or after January 1, 2013. This change will not have a material impact on the presentation of the Group's financial position or results of operations.

In December 2011, the IASB issued "Offsetting Financial Assets and Financial Liabilities" (Amendments to IAS 32) and "Disclosures – Offsetting Financial Assets and Financial Liabilities" (Amendments to IFRS 7). The amendments to IAS 32 (Financial Instruments: Presentation) clarify what is meant by "right of set-off in all circumstances" and "simultaneous settlement." The amendments to IFRS 7 (Financial Instruments: Disclosures) require gross and net offsetting amounts reflected in the statement of financial position – along with other existing rights of set-off that do not meet the requirements for set-off in the statement of financial position – to be presented in tabular form in future, unless a different form of presentation is more appropriate. The amendments are required to be applied retrospectively for annual and interim periods beginning on or after January 1, 2013 (IFRS 7 amendments) or January 1, 2014 (IAS 32 amendments).

In May 2012, the IASB published its fourth set of "Annual Improvements to IFRSs." The amendments address details of the recognition, measurement and disclosure of business transactions and serve to standardize terminology. They consist mainly of editorial changes to existing standards. The changes come into effect for annual periods beginning on or after January 1, 2013. They have not yet been endorsed by the European Union.

The amendments to IFRS 10, 11 and 12 issued by the IASB in June 2012 under the title "Consolidated Financial Statements, Joint Arrangements and Disclosure of Interest in Other Entities: Transition Guidance" serve to clarify and facilitate the first-time application of these standards. The amendments are to be applied for annual periods beginning on or after January 1, 2013. They have not yet been endorsed by the European Union.

In October 2012, under the title "Investment Entities," the IASB issued amendments to IFRS 10 and 12 and IAS 27 for investment entities. Such entities are to be exempted from the requirement to consolidate certain subsidiaries according to IFRS 10. Instead, they must recognize them at fair value through profit or loss. IFRS 12 introduces additional disclosure requirements for investment entities. The amendments are to be applied for annual periods beginning on or after January 1, 2014. They have not yet been endorsed by the European Union. These changes will not have a material impact on the presentation of the Group's financial position or results of operations.

4. Basic principles, methods and critical accounting estimates

The financial statements of the consolidated companies are prepared according to uniform accounting policies and measurement principles.

The consolidated financial statements of the Group are based on the principle of the historical cost of acquisition, construction or production, with the exception of the items reflected at fair value, such as financial assets held for trading or available for sale, and derivatives.

In preparing the consolidated financial statements, the management has to make certain assumptions and estimates that may substantially impact the presentation of the Group's financial position and/or results of operations.

Such estimates, assumptions or the exercise of discretion mainly relate to the useful life of noncurrent assets, the discounted cash flows used for impairment testing and purchase price allocations, and the recognition of provisions, including those for litigation-related expenses, pensions and other benefits, taxes, environmental compliance and remediation costs, sales allowances, product liability and guarantees. Essential estimates and assumptions that may affect reporting in the various item categories of the financial statements are described in the following sections of this note. Estimates are based on historical experience and other assumptions that are considered reasonable under given circumstances. They are continually reviewed but may vary from the actual values.

Changes in accounting policies or measurement principles in light of new or revised standards are applied retrospectively, except as otherwise provided in the respective standard. The income statement for the previous year and the opening statement of financial position for that year are adjusted as if the new accounting policies and/or measurement principles had always been applied.

CONSOLIDATION

The consolidated financial statements include subsidiaries, joint ventures and associates.

Subsidiaries are companies over which Bayer AG is able to exercise control – generally because Bayer AG directly or indirectly has a majority of the voting rights. Special purpose entities (SPEs) in which the Bayer Group holds 50% or less of the voting rights or shares are consolidated if the Bayer Group can derive the greater part of the economic benefit from the entity and/or bears the greater part of the risk. Inclusion of an entity's accounts in the consolidated financial statements begins when the Bayer Group is able to exercise control over the entity and ceases when it is no longer able to do so.

Sales revenues, income and expenses, and gains and losses arising from transactions among the consolidated companies, along with receivables and liabilities existing between them, are eliminated. Deferred income tax effects are reflected in consolidation.

Capital consolidation is performed by offsetting the carrying amounts of subsidiaries against their underlying equity. When a majority interest in a company is acquired, its pro-rated equity at the acquisition date is measured using the acquisition method. Identifiable assets and liabilities (including contingent liabilities) are recognized at their fair values along with attributable deferred tax assets and liabilities. Any remaining difference to the purchase price is recognized as goodwill. The purchase prices of acquired companies domiciled outside the eurozone are translated at the exchange rates in effect at the respective dates of acquisition.

The purchase of shares from other owners has to be presented as an equity transaction. The difference between the pro-rated equity acquired from other owners and the purchase price is therefore directly offset against equity.

Joint ventures are companies over which the Bayer Group exercises joint control with a third party. Joint control exists only when the strategic financial and operating decisions relating to the activity require the unanimous consent of the venturers. A company is generally deemed a joint venture if voting rights are divided equally between two stockholders or the company is established on the basis of a joint arrangement. Joint ventures are included by proportionate consolidation according to the principles followed for subsidiaries.

Associates over which Bayer AG exerts significant influence, generally through an ownership interest between 20% and 50%, are accounted for using the equity method. The carrying amount of a company accounted for using the equity method is adjusted annually by the change in its equity corresponding to Bayer's percentage interest in the company. Differences arising upon first-time inclusion using the equity method are accounted for according to full-consolidation principles. Bayer's share of changes in these companies' equities recognized in profit or loss – including impairment losses recognized on goodwill – are reflected in equity-method income/loss. Intercompany profits and losses for these companies were not material in either 2012 or 2011.

Subsidiaries that do not have a material impact on the Group's financial position or results of operations, either individually or in aggregate, are recognized in the consolidated financial statements at cost of acquisition less any impairment losses.

FOREIGN CURRENCY TRANSLATION

The financial statements of the individual companies for inclusion in the consolidated financial statements are prepared in their respective functional currencies. A company's functional currency is that of the economic environment in which it primarily generates and expends cash. The majority of consolidated companies carry out their activities autonomously from a financial, economic and organizational point of view, and their functional currencies are therefore the respective local currencies.

In the separate financial statements of the individual consolidated companies, receivables and liabilities in currencies other than the respective functional currency are translated at closing rates. Exchange rate differences from valuation of balances in foreign currencies are recognized in profit or loss.

In the consolidated financial statements, the assets and liabilities of companies outside the eurozone at the start and end of the year are translated into euros at closing rates. All changes occurring during the year and all income and expense items and cash flows are translated into euros at average monthly rates. Equity components are translated at the historical exchange rates prevailing at the respective dates of their first-time recognition in Group equity.

The exchange differences arising between the resulting amounts and those obtained by translating at closing rates are recognized outside profit or loss as "Exchange differences on translation of operations outside the eurozone" (in other comprehensive income) or "Exchange differences" (in the tables in the notes). When a company is deconsolidated, such exchange differences are reclassified from equity to profit or loss.

The exchange rates for major currencies against the euro varied as follows:

Exchange Rates for Major Currencies [Table 4.8]

		Closing rate		Average rate	
€1/		2011	2012	2011	2012
ARS	Argentina	5.57	6.48	5.74	5.83
BRL	Brazil	2.43	2.69	2.32	2.50
CAD	Canada	1.32	1.31	1.38	1.28
CHF	Switzerland	1.22	1.21	1.23	1.21
CNY	China	8.16	8.22	8.99	8.10
GBP	United Kingdom	0.84	0.82	0.87	0.81
JPY	Japan	100.20	113.61	110.75	102.38
MXN	Mexico	18.05	17.18	17.25	16.90
USD	United States	1.29	1.32	1.39	1.28

Subsidiaries whose functional currencies have experienced a cumulative inflation rate of more than 100% over the past three years applied the rules of IAS 29 (Financial Reporting in Hyperinflationary Economies).

NET SALES AND OTHER OPERATING INCOME

All revenues derived from the selling of products or rendering of services or from licensing agreements are recognized as sales. Other operational revenues are recognized as other operating income. Sales are recognized in profit or loss when the significant risks and rewards of ownership of the goods have been transferred to the customer, the company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold, the amount of revenue and costs incurred or to be incurred can be measured reliably, and it is sufficiently probable that the economic benefits associated with the transaction will flow to the company.

Sales are stated net of sales taxes, other taxes and sales deductions at the fair value of the consideration received or to be received. Sales deductions are estimated amounts for rebates, cash discounts and product returns. They are deducted at the time the sales are recognized, and appropriate provisions are recorded. Sales deductions are estimated primarily on the basis of historical experience, specific contractual terms and future expectations of sales development. It is unlikely that factors other than these could materially affect sales deductions in the Bayer Group. Adjustments to provisions made in prior periods for rebates, cash discounts or product returns were of secondary importance for income before income taxes in the years under report.

Provisions for rebates in 2012 amounted to 2.4% of total net sales (2011: 2.3%). In addition to rebates, Group companies offer cash discounts for prompt payment in some countries. Provisions for cash discounts as of December 31, 2012 and December 31, 2011 were less than 0.1% of total net sales for the respective year.

Sales are reduced by the amount of the provisions for expected returns of defective goods or of saleable products that may be returned under contractual arrangements. The net sales are reduced on the date of sale or on the date when the amount of future returns can be reasonably estimated. Provisions for product returns in 2012 amounted to 0.3% of total net sales (2011: 0.2%). If future product returns cannot be reasonably estimated and are significant to a sales transaction, the revenues and the related cost of sales are deferred until a reasonable estimate can be made or the right to return the goods has expired.

Some of the Bayer Group's revenues are generated on the basis of licensing agreements under which third parties have been granted rights to products and technologies. Payments received, or expected to be received, that relate to the sale or outlicensing of technologies or technological expertise are recognized in profit or loss as of the effective date of the respective agreement if all rights relating to the technologies and all obligations resulting from them have been relinquished under the contract terms. However, if rights to the technologies continue to exist or obligations resulting from them have yet to be fulfilled, the payments received are deferred accordingly. Upfront payments and similar non-refundable payments received under these agreements are recorded as other liabilities and recognized in profit or loss over the estimated performance period stipulated in the agreement.

License or research and development collaboration agreements may consist of multiple elements and provide for varying consideration terms, such as upfront payments and milestone or similar payments. They therefore have to be assessed to determine whether sales revenues should be recognized for individually delivered elements of such arrangements, i.e. for more than one unit of account. The condition for separate revenue recognition for individual units of account is that each element has value to the customer on a stand-alone basis, the fair value of the undelivered goods or unrendered services can be reliably determined, and delivery or performance of the as yet undelivered element(s) is probable and substantially within the control of the Bayer Group.

Other operating income may also arise from the exchange of intangible assets. The amount recognized is generally based on the fair value of the assets given up, calculated using the discounted cash flow method. If the assets given up are internally generated, the gain from the exchange generally equals their fair value.

RESEARCH AND DEVELOPMENT EXPENSES

For accounting purposes, research expenses are defined as costs incurred for current or planned investigations undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Development expenses are defined as costs incurred for the application of research findings or specialist knowledge to production, production methods, services or goods prior to the commencement of commercial production or use.

Research and development expenses are incurred in the Bayer Group for in-house research and development activities as well as numerous research and development collaborations and alliances with third parties.

Research and development expenses mainly comprise the costs for active ingredient discovery, clinical studies, research and development activities in the areas of application technology and engineering, field trials, regulatory approvals and approval extensions.

Research costs cannot be capitalized. The conditions for capitalization of development costs are closely defined: an intangible asset must be recognized if, and only if, there is reasonable certainty of receiving future cash flows that will cover an asset's carrying amount. Since our own development projects are often subject to regulatory approval procedures and other uncertainties, the conditions for the capitalization of costs incurred before receipt of approvals are not normally satisfied.

In the case of research and development collaborations, a distinction is generally made between payments on contract signature, upfront payments, milestone payments and cost reimbursements for work performed. If an intangible asset (such as the right to the use of an active ingredient) is acquired in connection with any of these payment obligations, the respective payment is capitalized even if it is uncertain whether further development work will ultimately lead to the production of a saleable product. Reimbursements of the cost of research or development work are recognized in profit or loss.

GOODWILL

In a business combination, goodwill is capitalized at the acquisition date. It is measured at its cost of acquisition, which is the excess of the acquisition price for shares in a company over the acquired net assets. The net assets are the balance of the fair values of the acquired identifiable assets and the assumed liabilities and contingent liabilities.

Goodwill is not amortized, but tested annually for impairment. Details of the annual impairment tests are given under "Procedure used in global impairment testing and its impact." Once an impairment loss has been recognized on goodwill, it is not reversed in subsequent periods.

OTHER INTANGIBLE ASSETS

An "other intangible asset" is an identifiable non-monetary asset without physical substance, other than goodwill (such as a patent, a trademark or a marketing right). It is capitalized if the future economic benefits attributable to the asset will probably flow to the company and the cost of acquisition or generation of the asset can be reliably measured.

Other intangible assets are recognized at the cost of acquisition or generation. Those with a determinable useful life are amortized accordingly on a straight-line basis over a period of up to 30 years, except where their actual depletion demands a different amortization pattern. Determination of the expected useful lives of such assets and the amortization patterns is based on estimates of the period for which they will generate cash flows. An impairment test is performed if there is an indication of possible impairment.

Other intangible assets with an indefinite life (such as the Bayer Cross trademark) and intangible assets not yet available for use (such as research and development projects) are not amortized, but tested annually for impairment.

Any impairment losses are recognized in profit or loss. If the reasons for a previously recognized impairment loss no longer apply, the impairment loss is reversed provided that the reversal does not cause the carrying amount to exceed the (amortized) cost of acquisition or construction.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is carried at the cost of acquisition or construction and depreciated over its estimated useful life. An impairment loss is recognized in addition if an asset's recoverable amount falls below its carrying amount.

The cost of acquisition comprises the acquisition price plus ancillary and subsequent acquisition costs, less any reduction received on the acquisition price. The cost of self-constructed property, plant and equipment comprises the direct cost of materials, direct manufacturing expenses, and appropriate allocations of material and manufacturing overheads. Where an obligation exists to dismantle or remove an asset or restore a site to its former condition at the end of its useful life, the present value of the related future payments is capitalized along with the cost of acquisition or construction upon completion and a corresponding liability is recognized.

If the construction phase of property, plant or equipment extends over a substantial period of time, the interest incurred on borrowed capital up to the date of completion is capitalized as part of the cost of acquisition or construction in accordance with IAS 23 (Borrowing Costs).

Costs for regular, comprehensive maintenance work (such as the major overhaul of a technical facility) are capitalized as a separate component if they satisfy the recognition criteria.

Property, plant and equipment is depreciated by the straight-line method over an asset's useful life, except where depreciation based on actual depletion is more appropriate.

The following depreciation periods are applied throughout the Group:

Useful Life of Property, Plant and Equipment [Table 4.9]

Buildings	20 to 50 years
Outdoor infrastructure	10 to 20 years
Storage tanks and pipelines	10 to 20 years
Plant installations	6 to 20 years
Machinery and equipment	6 to 12 years
Furniture and fixtures	4 to 10 years
Vehicles	4 to 8 years
Computer equipment	3 to 5 years
Laboratory and research facilities	3 to 5 years

Significant asset components with different useful lives are accounted for and depreciated separately.

If there are indications that an individual item of property, plant and equipment may be impaired, the recoverable amount is compared to the carrying amount. If the recoverable amount is less than the carrying amount, an impairment loss is recognized for the difference. If the reasons for a previously recognized impairment loss no longer apply, the impairment loss is reversed provided that the reversal does not cause the carrying amount to exceed the cost of acquisition or construction less depreciation.

When assets are sold, closed down or scrapped, the difference between the net proceeds and the net carrying amount of the assets is recognized as a gain or loss in other operating income or expenses, respectively.

Real estate held for investment comprises land and buildings not being used for operational or administrative purposes. It is measured using the cost model. The fair value of the investment property reported in the Notes is determined using the discounted cash flow method, comparisons with the current market values of similar properties, or reports from external experts.

LEASING

A lease is an agreement whereby the lessor assigns to the lessee the right to use an asset for an agreed period of time in return for a payment or series of payments. Leases are classified as either finance or operating leases. Leasing transactions that transfer substantially all the risks and rewards incidental to ownership of the leased asset to the lessee are classified as finance leases. All other leasing agreements are classified as operating leases. Whether an agreement constitutes a lease or contains a lease is determined upon inception of the lease.

Where the Bayer Group is the lessee in a finance lease, the leased asset is capitalized at the lower of the fair value of the asset and the present value of the minimum lease payments at the beginning of the lease term and simultaneously recognized under financial liabilities. The minimum lease payments are divided into the principal portion of the remaining obligation and the financing costs, which are determined using the effective-interest method. The leased asset is depreciated by the straight-line method over the shorter of its estimated useful life or the lease term.

Where the Bayer Group is the lessee in an operating lease, the lease payments are expensed. Where it is the lessor, the lease payments received are recognized in profit or loss. The leased asset continues to be recognized under property, plant and equipment in the Bayer Group's statement of financial position.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash, checks received, and balances with banks and companies. Cash equivalents are highly liquid short-term financial investments that are subject to an insignificant risk of changes in value, are easily convertible into a known amount of cash and have a maturity of three months or less from the date of acquisition or investment.

FINANCIAL ASSETS

Financial assets comprise loans and receivables, acquired equity and debt instruments, cash and cash equivalents, and derivatives with positive fair values.

They are recognized and measured in accordance with IAS 39 (Financial Instruments: Recognition and Measurement). Accordingly, financial assets are recognized in the consolidated financial statements if the Bayer Group has a contractual right to receive cash or other financial assets from another entity. Regular-way purchases and sales of financial assets are generally posted on the settlement date. Financial assets are initially recognized at fair value plus transaction costs. The transaction costs incurred for the purchase of financial assets held at fair value through profit or loss are expensed immediately. Interest-free or low-interest receivables are initially reflected at the present value of the expected future cash flows. For purposes of subsequent measurement, financial assets are allocated to the following categories according to IAS 39, with different measurement rules applying to each category. Allocation is made at the date of first-time recognition:

Financial assets held at fair value through profit or loss comprise those financial assets that are held for trading. Such financial assets were mainly acquired for purposes of liquidity management with the intention of reselling them within a short time. Receivables from forward commodity contracts and receivables from other derivatives that are included in other financial assets are also allocated to this category, except where hedge accounting is used. Changes in the fair value of financial assets in this category are recognized in profit or loss when the increase or decrease in fair value occurs.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are accounted for at amortized cost using the effective interest method. This category comprises trade accounts receivable, the loans and receivables included in other financial assets, the additional financial receivables reflected in other receivables, and cash and cash equivalents. Interest income from items assigned to this category is determined using the effective interest method.

Held-to-maturity financial assets are non-derivative financial assets, with fixed or determinable payments, that the Bayer Group is willing and able to hold until maturity. They are accounted for at amortized cost using the effective interest method. Held-to-maturity financial investments are recognized in other financial assets.

Available-for-sale financial assets are those non-derivative financial assets that are not assigned to any of the above categories. They mainly include equity instruments, such as shares, and debt instruments not to be held to maturity that are included in other financial assets. After their first-time recognition, available-for-sale financial assets are measured at fair value and any unrealized gains or losses are recognized outside profit or loss in equity. These are only reclassified to profit or loss if the assets are sold or if there are objective indications of impairment, in which case the accumulated loss is recognized in profit or loss. An objective indication of impairment is a significant or prolonged decrease in the fair value of an equity instrument to below its acquisition cost. Previously recognized impairment losses are reversed if the reasons for them no longer apply. Impairment loss reversals for equity instruments are recognized outside profit or loss, while those for debt instruments are recognized in profit or loss. Where possible, a fair value for equity and debt securities is derived from market data. Financial assets for which no market price is available and whose fair value cannot be reasonably estimated are recognized at cost less any impairment losses.

If there are substantial and objective indications of a decline in the value of loans and receivables, held-to-maturity financial assets or available-for-sale financial assets, an impairment test is performed. Indications of possible impairment include a high probability of insolvency, a significant deterioration in credit standing, a material breach of contract, operating losses reported by a company over several years, a reduction in market value, the financial restructuring of the debtor, or the disappearance of an active market for the asset.

In the case of loans and receivables, and held-to-maturity financial assets, an impairment test is performed in which the carrying amount is compared to the present value of the expected future cash flows, discounted at the original effective interest rate. If the carrying amount exceeds the present value, an impairment loss is recognized for the difference between the two amounts. If the reasons for previously recognized impairment losses no longer apply, the impairment losses are reversed provided that this does not cause the carrying amounts to exceed the amortized cost of acquisition.

Financial assets are derecognized when contractual rights to receive cash flows from the financial assets expire or the financial assets are transferred together with all material risks and benefits.

DERIVATIVES

The Bayer Group uses derivatives – such as forward exchange contracts and interest-rate swaps – to mitigate the risk of changes in exchange rates, interest rates and commodity prices. Derivatives are recognized at the trade date.

Contracts concluded in order to receive or deliver non-financial goods for the company's own purposes are not accounted for as derivatives but treated as pending transactions. Where embedded derivatives are identified that are required to be separated from the pending transactions, they are accounted for separately. To take advantage of market opportunities or cover possible peak demand, a non-material volume of transactions may be entered into for which the possibility of immediate resale cannot be excluded. Such transactions are allocated to separate portfolios upon acquisition and accounted for as derivatives according to IAS 39.

Derivatives are carried at fair value. Positive fair values at the end of the reporting period are reflected in financial assets, negative fair values in financial liabilities. Changes in the fair values of these derivatives are recognized directly in profit or loss except where hedge accounting is used. Changes in the fair values of forward exchange contracts and currency options serving as hedges of items in the statement of financial position are reflected in other financial income and expenses as exchange gains or losses,

while changes in the values of interest-rate swaps and interest-rate options are recognized in interest income or expense. Changes in the fair values of commodity futures and options, and of forward exchange contracts used to hedge forecasted transactions in foreign currencies, are recognized in other operating income or expenses.

The fair values of derivatives either correspond to market data or they are measured by the usual methods in light of the market data available at the measurement date. Currency and commodity contracts are measured individually at their forward rates or forward prices on the closing date. These depend on spot rates or prices including time spreads. The fair values of interest-rate hedging instruments are determined by discounting future cash flows over the remaining terms of the instruments at market rates of interest. The present value of each interest-rate or cross-currency interest-rate swap transaction is measured individually as of the closing date. Interest income is recognized in profit or loss at the maturity date.

Changes in the fair values of derivatives designated as fair-value hedges and the adjustments in the carrying amounts of the underlying transactions are recognized in profit or loss.

Changes in the fair values of the effective portion of derivatives designated as cash flow hedges are initially recognized outside profit or loss in accumulated other comprehensive income. They are reclassified to profit or loss when the underlying transaction is realized. If such a derivative is sold or ceases to qualify for hedge accounting, the change in its value continues to be recognized in accumulated other comprehensive income until the forecasted transaction is realized. If the forecasted transaction is no longer probable, the amount previously recognized in accumulated other comprehensive income has to be reclassified to profit or loss. The ineffective portion of gains or losses on derivatives designated as cash flow hedges is recognized either in other operating income or expenses or in the financial result, depending on the type of underlying transaction.

The income and expense reflected in the financial result pertaining to the derivatives and the underlying transactions are shown separately. Income and expense are not offset.

INVENTORIES

In accordance with IAS 2 (Inventories), inventories encompass assets consumed in production or in the rendering of services (raw materials and supplies), assets in the production process for sale (work in process), goods held for sale in the ordinary course of business (finished goods and goods purchased for resale), and advance payments on inventories. Inventories are recognized at their cost of acquisition or production – calculated by the weighted-average method – or at their net realizable value, whichever is lower. The net realizable value is the estimated selling price in the ordinary course of business less estimated cost to complete and selling expenses.

INCOME TAXES

Income taxes comprise the taxes levied on taxable income in the individual countries along with changes in deferred tax assets and liabilities that are recognized in profit or loss. The income taxes recognized are reflected at the amounts likely to be payable under the statutory regulations in force, or already enacted in relation to future periods, at the end of the reporting period.

In compliance with IAS 12 (Income Taxes), deferred taxes are recognized for temporary differences between the carrying amounts of assets and liabilities in the statement of financial position prepared according to IFRS and their tax bases. Deferred taxes are also recognized for consolidation measures and for tax loss carryforwards and tax credits that are likely to be usable.

Deferred tax assets relating to deductible temporary differences, tax credits and tax loss carryforwards are recognized where it is sufficiently probable that taxable income will be available in the future to enable them to be used. Deferred tax liabilities are recognized on temporary differences taxable in the future. Deferred taxes are calculated at the rates which – on the basis of the statutory regulations in force, or already enacted in relation to future periods, as of the closing date – are expected to apply in the individual countries at the time of realization. Deferred tax assets and deferred tax liabilities are offset if they relate to income taxes levied by the same taxation authority and Bayer has a legal right to settle on a net basis. Material effects of changes in tax rates or tax law on deferred tax assets and liabilities are generally accounted for in the period in which the changes are enacted. Such effects are normally recognized in profit or loss. Effects on deferred taxes previously recognized in other comprehensive income are recognized outside profit or loss.

Deferred and current taxes are recognized in profit or loss unless they relate to items recognized outside profit or loss in other comprehensive income, in which case they, too, are recognized in other comprehensive income.

The probability that deferred tax assets resulting from temporary differences or loss carryforwards can be used in the future is the subject of forecasts by the individual consolidated companies regarding their future earnings situation and other parameters.

Deferred tax liabilities are recognized on planned dividend payments by subsidiaries. Where no dividend payment is planned for the foreseeable future, no deferred tax liability is recognized on the difference between the proportionate net assets according to IFRS and the tax base of the investment in the subsidiary.

PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFITS

Within the Bayer Group, post-employment benefits are provided under defined contribution and/or defined benefit plans. In the case of defined contribution plans, the company pays contributions to publicly or privately administered pension plans on a mandatory, contractual or voluntary basis. Once the contributions have been paid, the company has no further payment obligations. The regular contributions constitute expenses for the year in which they are due and as such are included in the functional cost items, and thus in EBIT. All other post-employment benefit systems are defined benefit plans, which may be either unfunded, i.e. financed by provisions, or funded, i.e. financed through pension funds.

The present value of provisions for defined benefit plans and the resulting expense are calculated in accordance with IAS 19 (Employee Benefits) by the projected unit credit method. The future benefit obligations are valued by actuarial methods and spread over the entire employment period on the basis of specific assumptions regarding beneficiary structure and the economic environment. These relate mainly to the discount rate, the expected return on plan assets, future salary and pension increases, variations in health care costs, and attrition and mortality rates.

The discount rates used are calculated from the yields of high-quality corporate bond portfolios in specific currencies with cash flows approximately equivalent to the expected disbursements from the pension plans. The uniform discount rate derived from this interest-rate structure is thus based on the yields, at the closing date, of a portfolio of AA-rated corporate bonds whose weighted residual maturities approximately correspond to the duration necessary to cover the entire benefit obligation.

The expected long-term return on plan assets is determined on the basis of published and internal capital market reports and forecasts for each asset class. The expected return is applied to the fair value of plan assets at the beginning of each year.

The effects of changes in important parameters are explained in Note [25].

SEE NOTE [25]

The fair value of plan assets is deducted from the present value of the defined benefit obligation for pensions and other post-employment benefits. The obligations and plan assets are valued at regular intervals of not more than three years. Comprehensive actuarial valuations for all major plans are performed annually as of December 31. The difference between the defined benefit obligation – after deducting the fair value of plan assets – and the net amount recognized in the statement of financial position is attributable to unrecognized past service cost. Plan assets in excess of the benefit obligation are reflected in other receivables, subject to the asset ceiling specified in IAS 19 (Employee Benefits).

The balance of all income and expenses relating to defined benefit plans – other than the expected return on plan assets and interest cost – is recognized in EBIT. The expected return on plan assets and interest cost are reflected in the financial result under other financial income and expenses. Actuarial gains and losses from defined benefit plans and effects of the asset ceiling are recognized outside profit or loss, net of taxes, in other comprehensive income and reflected in the statement of changes in equity, as well as being recognized in full in the respective provision.

Early-retirement and certain other benefits to retirees are also included in the provisions for pensions, since these obligations are similar in character to pension obligations.

Because of changing market and economic conditions, the expenses and the obligations actually arising under the plans in the future may differ materially from the estimates made on the basis of these actuarial assumptions. The plan assets are mainly comprised of fixed-income and equity instruments. Therefore, declining returns in the bond or stock markets could necessitate additional contributions to the plans in order to cover current and future pension obligations. Higher or lower rates of employee fluctuation or longer or shorter lives of participants compared to the assumptions may also affect the levels of expenses for post-employment benefit obligations in the future.

OTHER PROVISIONS

Other provisions are recognized for present legal and constructive obligations arising from past events that will probably give rise to a future outflow of resources, provided that a reliable estimate can be made of the amount of the obligations.

Other provisions are measured in accordance with IAS 37 (Provisions, Contingent Liabilities and Contingent Assets) or, where applicable, IAS 19 (Employee Benefits). Where the cash outflow to settle an obligation is expected to occur after one year, the provision is recognized at the present value of the expected cash outflow. Claims for reimbursements from third parties are separately reflected in other receivables if their realization is virtually certain.

If the projected obligation declines as a result of a change in the estimate, the provision is reversed by the corresponding amount and the resulting income recognized in the operating expense item(s) in which the original charge was recognized.

To enhance the information content of the estimates, certain provisions that could have a material effect on the financial position or results of operations of the Group are selected and tested for their sensitivity to changes in the underlying parameters. To reflect uncertainty about the likelihood of the assumed events actually occurring, the impact of a five-percentage-point change in the probability of occurrence is examined in each case. This analysis has not shown other provisions to be materially sensitive.

Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate adjustments to tax income and expense in future periods. The Group establishes **provisions for taxes**, based on reasonable estimates, for liabilities to the tax authorities of the respective countries that are uncertain as to their amount and the probability of their occurrence. The amount of such provisions is based on various factors, such as experience with previous tax audits and differing legal interpretations by the taxable entity and the responsible tax authority.

Provisions for environmental protection are recorded if future cash outflows are likely to be necessary to ensure compliance with environmental regulations or to carry out remediation work, such costs can be reliably estimated and no future benefits are expected from such measures.

Estimating the future costs of environmental protection and remediation involves many uncertainties, particularly with regard to the status of laws, regulations and the information available about conditions in the various countries and at the individual sites. Significant factors in estimating the costs include previous experiences in similar cases, the conclusions in expert opinions obtained regarding the Group's environmental programs, current costs and new developments affecting costs, management's interpretation of current environmental laws and regulations, the number and financial position of third parties that may become obligated to participate in any remediation costs on the basis of joint liability, and the remediation methods likely to be deployed. Changes in these assumptions could impact future reported results.

Taking into consideration experience gained to date regarding environmental matters of a similar nature, provisions are believed to be adequate based upon currently available information. There were no significant changes in assumptions or estimates that would have impacted the income statement in prior years. However, given the difficulties inherent in estimating liabilities in the businesses in which the Group operates, especially those for which the risk of environmental damage is greater in relative terms (CropScience and MaterialScience), it remains possible that material additional costs will be incurred beyond the amounts accrued. It may transpire during remediation work that additional expenditures are necessary over an extended period and that these exceed existing provisions and cannot be reasonably estimated.

Provisions for restructuring only cover expenses that arise directly from restructuring measures, are necessary for restructuring and are not related to future business operations. Such expenses include severance payments to employees and compensation payments in respect of rented property that can no longer be used.

Restructuring measures may include the sale or termination of business units, site closures, relocations of business activities or fundamental reorganizations of business units.

The respective provisions are established when a detailed restructuring plan has been drawn up, resolved upon by the responsible decision-making level of management and communicated to the employees and/or their representatives. Provisions for restructuring are established at the present value of future disbursements.

Trade-related provisions are recorded mainly for the granting of rebates or discounts, product returns, or obligations in respect of goods or services already received but not yet invoiced.

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, patent disputes and environmental matters. **Provisions for litigations** are recorded in the statement of financial position in respect of pending or future litigations, subject to a case-by-case examination. Such legal proceedings are evaluated on the basis of the available information, including that from legal counsel acting for the Group, to assess potential outcomes. Where it is more likely than not that a present obligation arising out of legal proceedings will result in an outflow of resources, a provision is recorded in the amount of the present value of the expected cash outflows if these are considered to be reliably measurable. These provisions cover the estimated payments to plaintiffs, court fees, attorney costs and the cost of potential settlements. The evaluation is based on the current status of the litigations at the end of each reporting period and includes an assessment of whether the criteria for recording a provision are met and, if so, the amount of the provision to be recorded. Adjusting events are reflected up to the date of preparation of the consolidated financial statements.

Litigation and other judicial proceedings generally raise complex issues and are subject to many uncertainties and complexities including, but not limited to, the facts and circumstances of each particular case, the jurisdiction in which each suit is brought and differences in applicable law. The outcome of currently pending and future proceedings therefore cannot be predicted. As a result of a judgment in court proceedings or the conclusion of a settlement, the Bayer Group may incur charges in excess of presently established provisions and related insurance coverage.

Personnel-related provisions are mainly those recorded for annual bonus payments, variable one-time payments, individual performance awards, long-service awards, surpluses on long-term accounts and other personnel costs. Obligations under stock-based compensation programs that provide for awards payable in cash are also included here.

FINANCIAL LIABILITIES

Financial liabilities comprise primary financial liabilities and negative fair values of derivatives.

Primary financial liabilities are initially recognized in the consolidated financial statements at fair value if the Bayer Group has a contractual obligation to transfer cash or other financial assets to another party. In subsequent periods, such liabilities are measured at amortized cost using the effective interest method.

Financial liabilities are derecognized when the contractual obligation is discharged or canceled, or has expired.

OTHER RECEIVABLES AND LIABILITIES

Accrued items and other non-financial assets and liabilities are carried at amortized cost. They are amortized to income by the straight-line method or according to performance of the underlying transaction.

In accordance with IAS 20 (Accounting for Government Grants and Disclosure of Government Assistance), grants and subsidies from third parties that serve to promote investment are reflected in the statement of financial position under other liabilities and amortized to income over the useful lives of the respective investments.

ASSETS HELD FOR SALE

Assets held for sale comprise noncurrent assets or disposal groups (together with any liabilities), the carrying amounts of which will be realized principally through a highly probable sale transaction within the next twelve months or an already executed sale transaction, and not through continued use. At the time of their classification as "held for sale," such assets are collectively measured at the lower of the carrying amount and fair value less costs to sell, and depreciation or amortization ceases.

ACQUISITION ACCOUNTING

Acquired businesses are accounted for using the acquisition method, which requires that the assets acquired and liabilities assumed be recorded at their respective fair values on the date Bayer obtains control. Acquisition-related costs are recognized as expenses in the periods in which they occur.

The application of the acquisition method requires certain estimates and assumptions to be made, especially concerning the fair values of the acquired intangible assets, property, plant and equipment and the liabilities assumed at the acquisition date, and the useful lives of the acquired intangible assets, property, plant and equipment.

Measurement is based to a large extent on anticipated cash flows. If actual cash flows vary from those used in calculating fair values, this may materially affect the Group's future results of operations. In particular, the estimation of discounted cash flows from intangible assets under development, patented and non-patented technologies and brands is based on assumptions concerning, for example:

- the outcomes of research and development activities regarding compound efficacy, results of clinical trials, etc.,
- the probability of obtaining regulatory approvals in individual countries,
- long-term sales trends,
- possible selling price erosion due to generic competition in the market following patent expirations,
- the behavior of competitors (launch of competing products, marketing initiatives, etc.).

For significant acquisitions, the purchase price allocation is carried out with assistance from independent third-party valuation specialists. The valuations are based on the information available at the acquisition date.

In step acquisitions, the fair values of the acquired entity's assets and liabilities are measured in accordance with IFRS 3 (Business Combinations) at the date on which control is obtained. Any resulting adjustments to the fair value of the existing interest are recognized in profit or loss. The carrying amount of the assets and liabilities already recognized in the statement of financial position is then adjusted accordingly.

PROCEDURE USED IN GLOBAL IMPAIRMENT TESTING AND ITS IMPACT

Impairment tests are performed not only on individual items of intangible assets, property, plant and equipment, but also at the level of cash-generating units or groups of cash-generating units. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bayer Group regards its strategic business entities or groups of strategic business entities, as well as certain product families, as cash-generating units and subjects them to global impairment testing. The strategic business entities constitute the second financial reporting level below the segments.

During 2012, the level for global impairment testing of goodwill in the Pharmaceuticals reporting segment was amended due to a change in the management of the business. Global impairment testing has since been carried out at the level of the Pharmaceuticals operating segment. A comparison based on the previous management system took place at the time of transition but did not identify a need for impairment.

Cash-generating units and unit groups are globally tested if there is an indication of possible impairment. Those to which goodwill is allocated are tested at least annually.

Impairment testing involves comparing the carrying amount of each cash-generating unit, unit group or item of intangible assets, property, plant or equipment to the recoverable amount, which is the higher of its fair value less costs to sell or value in use. If the carrying amount exceeds the recoverable amount, an impairment loss must be recognized for the difference. If a strategic business entity or entity group is found to be impaired, an impairment loss is first recognized on any goodwill allocated to it. Any remaining part of the impairment loss is then allocated among the other assets of the strategic business entity or entity group in proportion to their carrying amounts. The resulting expense is reflected in the same functional item of the income statement as the depreciation or amortization of the respective assets. If the criteria for a special item are satisfied, the impairment loss is recognized in profit or loss under other operating expenses. Income from impairment loss reversals is recognized in other operating income.

The recoverable amount is generally determined on the basis of the fair value less costs to sell, taking into account the present value of the future net cash flows as market prices for the individual units are not normally available. These are forecasted on the basis of the Bayer Group's current planning, the planning horizon normally being three to five years. Forecasting involves making assumptions, especially regarding future selling prices, sales volumes and costs. Where the recoverable amount is the fair value less costs to sell, the cash-generating unit or unit group is measured from the viewpoint of an independent market participant. Where the recoverable amount is the value in use, the cash-generating unit, unit group or individual asset is measured as currently used. In either case, net cash flows beyond the planning period are determined on the basis of long-term business expectations using the respective individual growth rates derived from market information.

The net cash inflows are discounted at a rate equivalent to the weighted average cost of equity and debt capital. To allow for the different risk and return profiles of the Bayer Group's principal businesses, the after-tax cost of capital is calculated separately for each subgroup and a subgroup-specific capital structure is defined by benchmarking against comparable companies in the same industry sector. The cost of equity corresponds to the return expected by stockholders, while the cost of debt is based on the conditions on which comparable companies can obtain long-term financing. Both components are derived from capital market information.

The growth rates applied for impairment testing in 2012 and 2011 and the capital cost factors used to discount the expected cash flows are shown in the following table:

Impairment Testing Parameters [Table 4.10]

	HealthCare		CropScience		MaterialScience	
	2011	2012	2011	2012	2011	2012
	%	%	%	%	%	%
Growth rate	−2.0–0.0	−2.0–0.0	1.6–2.9	1.7–2.9	0.0–0.5	0.0–2.0
After-tax capital cost factor	5.5	5.6	6.6	6.7	6.6	6.9
Pre-tax capital cost factor	6.7–8.6	7.2–10.1	8.4–12.0	8.3–9.4	8.3–10.8	8.8–9.9

A risk premium of 3.5 percentage points was previously added to the discount rate for the strategic business entity Seeds and Traits, which is assigned to the Crop Protection/Seeds operating segment. For the purpose of the impairment test carried out in 2012, this risk was reflected in the future net cash flows.

In 2012, no impairment losses (2011: €21 million) were recognized on goodwill on the basis of the global annual impairment testing of the cash-generating units and unit groups. Taking into account impairment loss reversals of €21 million (2011: €37 million), net impairment losses on intangible assets, property, plant and equipment amounted to €347 million (2011: €248 million). Details are provided in Notes [17] and [18].

SEE NOTES [17], [18]

Although the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which the Bayer Group operates, and estimates of the discounted future cash flows are believed to be appropriate, changes in assumptions or circumstances could require changes in the analysis. This could lead to additional impairment losses in the future or – except in the case of goodwill – to reversals of previously recognized impairment losses if developments are contrary to expectations.

The sensitivity analysis for cash-generating units and unit groups to which goodwill is allocated was based on a 10% decline in future cash flows and a 10% increase in the weighted average cost of capital because changes up to this magnitude are reasonably possible, especially in the long term. We concluded that no impairment loss would need to be recognized on goodwill in any cash-generating unit or unit group under these conditions.

5. Segment reporting

At Bayer the Board of Management, as the chief operating decision maker, allocates resources to the operating segments and assesses their performance. The reportable segments and regions are identified, and the disclosures selected, in line with the internal financial reporting system (management approach) and based on the Group accounting policies outlined in Note [4].

SEE NOTE [4]

As of December 31, 2012, the Bayer Group comprised three subgroups, with operations subdivided into strategic business entities known as divisions (HealthCare), business groups (CropScience) or business units (MaterialScience). Their activities are aggregated into four reportable segments according to economic characteristics, products, production processes, customer relationships, methods of distribution and regulatory environment.

The segments' activities are as follows:

Activities of the Segments [Table 4.11]

Subgroup/Segment	Activities
HealthCare	
Pharmaceuticals	Development, production and marketing of prescription pharmaceuticals, such as for the treatment of hypertension, cardiovascular diseases, infectious diseases, cancer, multiple sclerosis, and for contraception
Consumer Health	Development, production and marketing of over-the-counter medications, dermatology products, nutritional supplements for humans and animals, veterinary medicines and grooming products for animals; diagnostic systems such as blood glucose meters, medical products such as injection systems and contrast agents for diagnostic procedures
CropScience	
CropScience	Development, production and marketing of a comprehensive product portfolio in the areas of crop protection, seeds and plant traits and for gardens, the green industry and non-agricultural pest control
MaterialScience	
MaterialScience	Development, production and marketing of high-quality products in the areas of polyurethanes, polycarbonates, coating and adhesive raw materials and functional films; production and marketing of selected inorganic basic chemicals

Business activities that cannot be allocated to any other segment are reported under "All other segments." These include primarily the services provided by the service areas: Business Services, Technology Services and Currenta.

Holding companies' activities and the elimination of intersegment sales are presented in our segment reporting as "Corporate Center and Consolidation."

The reconciliation in the table "Key Data by Region" eliminates interregional items and transactions and reflects income, expenses, assets and liabilities not allocable to geographical areas, particularly those relating to the Corporate Center.

The segment data are calculated as follows:

- The intersegment sales reflect intra-Group transactions effected at transfer prices fixed on an arm's-length basis.
- Although EBIT before special items and EBITDA before special items are not defined in the International Financial Reporting Standards, they represent key performance indicators for the Bayer Group. The special items comprise effects that are non-recurring or do not regularly recur or attain similar magnitudes. EBITDA is the EBIT as reported in the income statement plus amortization and impairment losses on intangible assets and depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals.
- The gross cash flow comprises income after taxes, plus income taxes, plus financial result, minus income taxes paid or accrued, plus depreciation, amortization and impairment losses, minus impairment loss reversals, plus/minus changes in pension provisions, minus gains/plus losses on retirements of noncurrent assets, minus gains from the remeasurement of already held assets in step acquisitions. The change in pension provisions includes the elimination of non-cash components of EBIT. It also contains benefit payments during the year.

- The net cash flow is the cash flow from operating activities as defined in IAS 7 (Statement of Cash Flows).
- The capital invested and the segment assets include all assets serving the respective segment that are required to yield a return on their cost of acquisition. Segment assets include, in addition, assets held for sale where the return is covered by the sale proceeds. Similarly, the segment liabilities include the liabilities directly related to assets held for sale. Also included in the capital invested and in segment assets are material participating interests of direct relevance to business operations. Intangible assets and property, plant and equipment are included in the capital invested at cost of acquisition or construction throughout their useful lives. Interest-free liabilities are deducted from the capital invested, which is stated as of December 31.
- The CFROI – a measure of the return on capital employed – is the difference between the gross cash flow and the cost of reproducing depletable assets, divided by the average capital invested for the year.
- The equity items reflect the earnings and carrying amounts of companies accounted for using the equity method.
- Since financial management of Group companies is carried out centrally by Bayer AG, financial liabilities are not directly allocated among the segments. Consequently, the liabilities shown for the individual segments do not include financial liabilities. These are included in the reconciliation.
- The number of employees on either permanent or fixed-term contracts is stated in full-time equivalents (FTE), with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include trainees.

The reconciliations of EBITDA before special items, EBIT before special items and EBIT to Group income before income taxes and of the assets and liabilities of the segments to the assets and liabilities, respectively, of the Group are given in the following tables:

Reconciliation of Segments' EBITDA Before Special Items to Group Income Before Income Taxes [Table 4.12]

	2011	2012
	€ million	€ million
EBITDA before special items of segments	7,818	8,534
EBITDA before special items of Corporate Center	(205)	(250)
EBITDA before special items	**7,613**	**8,284**
Depreciation, amortization and impairment losses before special items of segments	(2,583)	(2,608)
Depreciation, amortization and impairment losses before special items of Corporate Center	(5)	(5)
Depreciation, amortization and impairment losses before special items	**(2,588)**	**(2,613)**
EBIT before special items of segments	5,235	5,926
EBIT before special items of Corporate Center	(210)	(255)
EBIT before special items	**5,025**	**5,671**
Special items of segments	(876)	(1,718)
Special items of Corporate Center	-	7
Special items	**(876)**	**(1,711)**
EBIT of segments	4,359	4,208
EBIT of Corporate Center	(210)	(248)
EBIT	**4,149**	**3,960**
Financial result	(786)	(712)
Income before income taxes	**3,363**	**3,248**

Reconciliation of Segments' Assets to Group Assets [Table 4.13]

	2011	2012
	€ million	€ million
Assets of the operating segments	**45,660**	**46,057**
Corporate Center assets	303	265
Non-allocated assets	6,802	5,014
Group assets	**52,765**	**51,336**

Reconciliation of Segments' Liabilities to Group Liabilities [Table 4.14]

	2011	2012
	€ million	€ million
Liabilities of the operating segments	**15,468**	**18,759**
Corporate Center liabilities	3,902	3,325
Non-allocated liabilities	14,124	10,683
Group liabilities	**33,494**	**32,767**

SEE NOTE [1]

The reconciliation of segment sales to Group sales is apparent from the table of key data by segment in Note [1].

INFORMATION ON GEOGRAPHICAL AREAS

The following table provides a regional breakdown of external sales by market and of intangible assets, property, plant and equipment:

Information about Geographical Areas [Table 4.15]

	Net sales (external) – by market		Intangible assets and property, plant and equipment	
	2011	2012	2011	2012
	€ million	€ million	€ million	€ million
Germany	4,648	4,640	13,628	12,945
United States	7,000	8,244	5,902	6,097
China	2,498	3,113	2,420	2,396
Other	22,382	23,763	7,328	7,182
Total	**36,528**	**39,760**	**29,278**	**28,620**

INFORMATION ON MAJOR CUSTOMERS

Revenues from transactions with a single customer in no case exceeded 10% of Bayer Group sales in 2012 or 2011.

6. Scope of consolidation; subsidiaries and affiliates

6.1 Changes in the scope of consolidation

Changes in the scope of consolidation in 2012 were as follows:

Change in Number of Consolidated Companies [Table 4.16]

	Germany	Other countries	Total
Bayer AG and consolidated companies			
December 31, 2011	58	225	**283**
Changes in scope of consolidation	2	-	**2**
Additions	5	9	**14**
Retirements	(2)	(6)	**(8)**
December 31, 2012	**63**	**228**	**291**

The increase in the number of fully consolidated companies in 2012 is primarily due to the formation of new companies.

The figure for December 31, 2012 in the above table includes three joint ventures (2011: four joint ventures) that were proportionately consolidated in compliance with IAS 31 (Interests in Joint Ventures). The remaining 50% of the shares in the systems house joint venture Baulé S.A.S., which was included by proportionate consolidation in 2011, were acquired as of March 31, 2012. The joint ventures affected the Group statement of financial position and income statement as follows:

Assets, Liabilities and Results of Operations of Joint Ventures [Table 4.17]

	2012		2012
	€ million		€ million
Current assets	15	Income	52
Noncurrent assets	51	Expenses	(29)
Current liabilities	(13)		
Noncurrent liabilities	(12)		
Net assets	**41**	**Income after taxes**	**23**

The income after taxes of the joint ventures includes the proportionately consolidated share of the income after taxes of Baulé S.A.S. through March 31, 2012, amounting to €19 million.

Also included in the consolidated financial statements are four (2011: four) associates accounted for using the equity method. Details of their impact on the income statement and the statement of financial position are shown in Note [19].

SEE NOTE [19]

A total of 86 (2011: 88) subsidiaries and 14 (2011: 15) associates or joint ventures that in aggregate are immaterial to the Bayer Group's financial position and results of operations are not consolidated but recognized at amortized cost. The immaterial subsidiaries accounted for less than 0.3% of Group sales, less than 0.3% of equity and less than 0.3% of total assets.

The following details of subsidiary and affiliated companies are provided pursuant to Section 313 of the German Commercial Code.

The companies fully consolidated in the financial statements of the Bayer Group are listed in the following table:

Fully Consolidated Subsidiaries [Table 4.18]

Company Name	Place of Business	Bayer's interest
		%
Europe		
AgrEvo Verwaltungsgesellschaft mbH	Frankfurt am Main, Germany	100
Alcafleu Management GmbH & Co. KG	Schönefeld, Germany	99.9
Baulé S.A.S.	Romans-sur-Isère, France	100
Bayer (Schweiz) AG	Zurich, Switzerland	100
Bayer 04 Immobilien GmbH	Leverkusen, Germany	100
Bayer 04 Leverkusen Fußball GmbH	Leverkusen, Germany	100
Bayer A/S	Lyngby, Denmark	100
Bayer AB	Solna, Sweden	100
Bayer Agriculture Limited	Cambridge, U.K.	100
Bayer Altersversorgung GmbH	Leverkusen, Germany	100
Bayer Animal Health GmbH	Leverkusen, Germany	100
Bayer Antwerpen NV	Antwerp, Belgium	100
Bayer AS	Oslo, Norway	100
Bayer Austria Gesellschaft m.b.H.	Vienna, Austria	100
Bayer B.V.	Mijdrecht, Netherlands	100
Bayer Beteiligungsverwaltung Goslar GmbH	Leverkusen, Germany	100
Bayer Bitterfeld GmbH	Bitterfeld-Wolfen, Germany	100
Bayer Bulgaria EOOD	Sofia, Bulgaria	100
Bayer Business Services GmbH	Leverkusen, Germany	100
Bayer Capital Corporation B.V.	Mijdrecht, Netherlands	100
Bayer Chemicals AG	Leverkusen, Germany	100
Bayer Consumer Care AG	Basel, Switzerland	100
Bayer CropScience (Portugal)-Produtos para a Agricultura, Lda	Carnaxide, Portugal	100
Bayer CropScience AG	Monheim, Germany	100
Bayer CropScience Beteiligungsgesellschaft mbH	Frankfurt am Main, Germany	100
Bayer CropScience Deutschland GmbH	Langenfeld, Germany	100
Bayer CropScience Holding SA	Lyon, France	100
Bayer CropScience Holdings Limited	Cambridge, U.K.	100
Bayer CropScience Limited	Cambridge, U.K.	100
Bayer CropScience NV	Diegem, Belgium	100
Bayer CropScience Raps GmbH	Leverkusen, Germany	100
Bayer CropScience S.r.l.	Milan, Italy	100
Bayer CropScience Vermögensverwaltungs-gesellschaft mbH	Leverkusen, Germany	100
Bayer CropScience, S.L.	Quart de Poblet, Spain	100
Bayer d.o.o.	Belgrade, Serbia	100
Bayer d.o.o.	Ljubljana, Slovenia	100
Bayer d.o.o.	Zagreb, Croatia	100
Bayer Direct Services GmbH	Leverkusen, Germany	100
Bayer Gastronomie GmbH	Leverkusen, Germany	100
Bayer Gesellschaft für Beteiligungen mbH	Leverkusen, Germany	100
Bayer Global Investments B.V.	Mijdrecht, Netherlands	100
Bayer HealthCare AG	Leverkusen, Germany	100
Bayer HealthCare Manufacturing S.r.l.	Milan, Italy	100
Bayer Hellas AG	Athens, Greece	100
Bayer Hispania, S.L.	Sant Joan Despi, Spain	100
Bayer Holding France SCS	Lyon, France	100

Fully Consolidated Subsidiaries [Table 4.18 (continued)]

Company Name	Place of Business	Bayer's interest
		%
Bayer Hungaria Kft.	Budapest, Hungary	100
Bayer Innovation GmbH	Leverkusen, Germany	100
Bayer Intellectual Property GmbH	Monheim, Germany	100
Bayer International SA	Fribourg, Switzerland	100
Bayer Limited	Dublin, Ireland	100
Bayer Ltd.	Kiev, Ukraine	100
Bayer MaterialScience AG	Leverkusen, Germany	100
Bayer MaterialScience Customer Services GmbH	Leverkusen, Germany	100
Bayer MaterialScience GmbH	Darmstadt, Germany	100
Bayer MaterialScience NV	Tielt, Belgium	100
Bayer MaterialScience Oldenburg GmbH & Co. KG	Oldenburg, Germany	100
Bayer MaterialScience S.p.A.	Milan, Italy	90
Bayer MaterialScience S.r.l.	Milan, Italy	100
Bayer MaterialScience, S.L.	Sant Joan Despi, Spain	100
Bayer Nordic SE	Espoo, Finland	100
Bayer NV	Diegem, Belgium	100
Bayer OY	Turku, Finland	100
Bayer Pharma AG	Berlin, Germany	100
Bayer Polyols S.N.C.	Puteaux, France	100
Bayer Polyurethanes B.V.	Mijdrecht, Netherlands	100
Bayer Portugal, SA	Carnaxide, Portugal	100
Bayer Public Limited Company	Newbury, U.K.	100
Bayer Real Estate GmbH	Leverkusen, Germany	100
Bayer S.A.S.	Lyon, France	100
Bayer S.p.A.	Milan, Italy	100
Bayer s.r.o.	Prague, Czech Republic	100
Bayer Santé Familiale SAS	Gaillard, France	100
Bayer Santé SAS	Loos, France	100
Bayer SARL	Lyon, France	100
Bayer Schering Pharma AG	Berlin, Germany	100
Bayer Sp. z o.o.	Warsaw, Poland	100
Bayer Technology Services GmbH	Leverkusen, Germany	100
Bayer Vital GmbH	Leverkusen, Germany	100
Bayer Weimar GmbH und Co. KG	Weimar, Germany	100
Bayer World Investments B.V.	Mijdrecht, Netherlands	100
Bayer, spol. s.r.o.	Bratislava, Slovakia	100
Bayer-Handelsgesellschaft mit beschränkter Haftung	Leverkusen, Germany	100
Berlimed, S.A.	Madrid, Spain	100
Berlis AG	Zurich, Switzerland	100
Biogenetic Technologies B.V.	Rotterdam, Netherlands	100
Chemie-Beteiligungsaktiengesellschaft	Glarus, Switzerland	100
Chemion Logistik GmbH	Leverkusen, Germany	100
Currenta GmbH & Co. OHG	Leverkusen, Germany	60
Dritte Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Dritte K-W-A Beteiligungsgesellschaft mbH & Co. oHG	Leverkusen, Germany	100
Drugofa GmbH	Cologne, Germany	100
Epurex Films GmbH & Co. KG	Bomlitz, Germany	100
Erste Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Erste K-W-A Beteiligungsgesellschaft mbH	Leverkusen, Germany	100
Euroservices Bayer GmbH	Leverkusen, Germany	100
EuroServices Bayer, S.L.	Sant Joan Despi, Spain	100
Fünfte Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Generics Holding GmbH	Leverkusen, Germany	100

Fully Consolidated Subsidiaries [Table 4.18 (continued)]

Company Name	Place of Business	Bayer's interest
		%
GP Grenzach Produktions GmbH	Grenzach-Wyhlen, Germany	100
Hild Samen GmbH	Marbach am Neckar, Germany	100
Intendis GmbH	Berlin, Germany	100
Intendis Manufacturing S.p.A.	Milan, Italy	100
Intraserv GmbH & Co. KG	Schönefeld, Germany	100
Jenapharm GmbH & Co. KG	Jena, Germany	100
KOSINUS Grundstücks-Verwaltungsgesellschaft mbH & Co. Gamma OHG	Berlin, Germany	100
KVP Pharma+Veterinär Produkte GmbH	Kiel, Germany	100
Marotrast GmbH	Jena, Germany	100
Mediwest Norway AS	Oslo, Norway	100
Medrad Belgium BVBA	Diegem, Belgium	100
Medrad Denmark ApS	Lyngby, Denmark	100
Medrad Europe B.V.	Maastricht, Netherlands	100
Medrad France S.A.R.L.	Rungis, France	100
Medrad Italia S.r.l.	Cava Manara, Italy	100
Medrad Medizinische Systeme GmbH	Volkach, Germany	100
Medrad Sweden AB	Mölndal, Sweden	100
Medrad UK Limited	Ely, U.K.	100
MENADIER Heilmittel GmbH	Berlin, Germany	100
Nunhems B.V.	Haelen, Netherlands	100
Nunhems France S.A.R.L.	Soucelles, France	100
Nunhems Hungary Kft.	Szolnok, Hungary	100
Nunhems Italy S.r.l.	St. Agata Bolognes, Italy	100
Nunhems Netherlands B.V.	Haelen, Netherlands	100
Nunhems Poland Sp. z o.o.	Poznan, Poland	100
Nunhems Spain, S.A.	Valencia, Spain	100
Pallas Versicherung AG	Leverkusen, Germany	100
Pandias Re AG	Luxembourg City, Luxembourg	100
PGS International N.V.	The Hague, Netherlands	100
Pharma-Verlagsbuchhandlung GmbH	Berlin, Germany	100
SC Bayer SRL	Bucharest, Romania	100
Schering Holdings Limited	Newbury, U.K.	100
Schering-Kahlbaum Gesellschaft mit beschränkter Haftung	Berlin, Germany	100
Siebte Bayer VV GmbH	Leverkusen, Germany	100
TECTRION GmbH	Leverkusen, Germany	100
TOO Bayer KAZ	Astana, Kazakhstan	100
TravelBoard GmbH	Leverkusen, Germany	100
UAB Bayer	Vilnius, Lithuania	100
Vierte Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
ZAO Bayer	Moscow, Russia	100
Zweite Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Zweite K-W-A Beteiligungsgesellschaft mbH	Leverkusen, Germany	100
North America		
AgraQuest Holding Inc.	Davis, U.S.A.	100
AgraQuest, Inc.	Davis, U.S.A.	100
Athenix Corp.	Research Triangle Park, U.S.A.	100
Bayer Business and Technology Services LLC	Pittsburgh, U.S.A.	100
Bayer Canadian Holdings Inc.	Toronto, Canada	100
Bayer Corporation	Pittsburgh, U.S.A.	100
Bayer Cotton Seed International Inc.	Research Triangle Park, U.S.A.	51
Bayer CropScience Holding Inc.	Research Triangle Park, U.S.A.	100

Fully Consolidated Subsidiaries [Table 4.18 (continued)]

Company Name	Place of Business	Bayer's interest
		%
Bayer CropScience Holdings Inc.	Calgary, Canada	100
Bayer CropScience Inc.	Calgary, Canada	100
Bayer CropScience Inc.	Research Triangle Park, U.S.A.	100
Bayer CropScience LLC	Research Triangle Park, U.S.A.	100
Bayer CropScience LP	Research Triangle Park, U.S.A.	100
Bayer HealthCare LLC	Tarrytown, U.S.A.	100
Bayer HealthCare Pharmaceuticals Inc.	Pine Brook, U.S.A.	100
Bayer HealthCare Pharmaceuticals LLC	Pine Brook, U.S.A.	100
Bayer Inc.	Toronto, Canada	100
Bayer International Trade Services Corporation	Weirton, U.S.A.	100
Bayer MaterialScience LLC	Pittsburgh, U.S.A.	100
Bayer Overseas Trade Services Corporation	Wilmington, U.S.A.	100
Bayer Pharma Chemicals Inc.	Pine Brook, U.S.A.	100
Bayer Puerto Rico Inc.	San Juan, Puerto Rico	100
Bayer West Coast Corporation	Wilmington, U.S.A.	100
Baypo I LLC	New Martinsville, U.S.A.	100
Baypo II LLC	New Martinsville, U.S.A.	100
BAYPO Limited Partnership	New Martinsville, U.S.A.	100
BIPPO Corporation	New Martinsville, U.S.A.	100
Collateral Therapeutics, Inc.	Richmond, U.S.A.	100
Cooper Land Company of New Jersey, Inc.	Tarrytown, U.S.A.	100
Guidance Interactive Healthcare, Inc	Tarrytown, U.S.A.	100
Hornbeck Seed Company, Inc.	Lubbock, U.S.A.	100
Intendis, Inc.	Morristown, U.S.A.	100
iSense Corporation	Wilsonville, U.S.A.	100
iSense Development Corporation	Wilsonville, U.S.A.	100
Medrad, Inc.	Indianola, U.S.A.	100
NippoNex Inc.	Tarrytown, U.S.A.	100
NOR-AM Agro LLC	Pine Brook, U.S.A.	100
NOR-AM Land Company	Pine Brook, U.S.A.	100
Nunhems Melons, Inc.	Parma, U.S.A.	100
Nunhems USA, Inc.	Morgan Hill, U.S.A.	100
Radimetrics Inc.	Toronto, Canada	100
SB Capital Corporation	Pine Brook, U.S.A.	100
Schering Berlin Inc.	Pine Brook, U.S.A.	100
Stoneville Pedigreed Seed Company	St. Louis, U.S.A.	100
STWB Inc.	Pittsburgh, U.S.A.	100
Texas Brine Company LLC	Houston, U.S.A.	0*
Asia / Pacific		
Bayer (China) Limited	Beijing, China	100
Bayer (Malaysia) Sdn. Bhd.	Petaling Jaya, Malaysia	100
Bayer (Sichuan) Animal Health Co., Ltd.	Chengdu, China	100
Bayer (South East Asia) Pte Ltd	Singapore	100
Bayer Australia Limited	Pymble, Australia	100
Bayer BioScience Pvt. Ltd	Hyderabad, India	100
Bayer Business Services Philippines, Inc.	Taguig City, Philippines	100
Bayer Business Services Private Limited	Powai, India	100
Bayer Co. (Malaysia) Sdn Bhd	Petaling Jaya, Malaysia	100
Bayer CropScience (China) Company Ltd.	Hangzhou, China	100
Bayer CropScience Holdings Pty Ltd	East Hawthorn, Australia	100
Bayer CropScience K.K.	Tokyo, Japan	100
Bayer CropScience Limited	Mumbai, India	71.1

* fully consolidated special-purpose entity according to IAS 27 in conjunction with SIC-12

Fully Consolidated Subsidiaries [Table 4.18 (continued)]

Company Name	Place of Business	Bayer's interest
		%
Bayer CropScience Ltd.	Dhaka, Bangladesh	60
Bayer CropScience Ltd.	Seoul, South Korea	100
Bayer CropScience Pty Limited	East Hawthorn, Australia	100
Bayer CropScience, Inc.	Laguna, Philippines	100
Bayer Far East Service Co. Ltd.	Hong Kong, China	100
Bayer Healthcare Co. Ltd.	Beijing, China	100
Bayer HealthCare Limited	Hong Kong, China	100
Bayer Holding Ltd.	Tokyo, Japan	100
Bayer Jinling Polyurethane Co., Ltd.	Nanjing, China	55
Bayer Korea Ltd.	Seoul, South Korea	100
Bayer MaterialScience (Beijing) Company Limited	Beijing, China	100
Bayer MaterialScience (China) Company Limited	Shanghai, China	100
Bayer MaterialScience (Qingdao) Co. Ltd.	Qingdao, China	100
Bayer MaterialScience (Shanghai) Management Company Limited	Shanghai, China	100
Bayer MaterialScience Limited	Hong Kong, China	100
Bayer MaterialScience Ltd.	Gimhae, South Korea	100
Bayer MaterialScience Ltd.	Tokyo, Japan	100
Bayer MaterialScience Private Limited	Mumbai, India	100
Bayer MaterialScience Pty Ltd	Pymble, Australia	100
Bayer MaterialScience Taiwan Limited	Taipei, Taiwan	94.9
Bayer New Zealand Limited	Auckland, New Zealand	100
Bayer Pakistan (Private) Limited	Karachi, Pakistan	100
Bayer Pharmaceuticals Private Limited	Mumbai, India	100
Bayer Philippines, Inc.	Laguna, Philippines	100
Bayer Taiwan Company Ltd.	Taipei, Taiwan	100
Bayer Technology and Engineering (Shanghai) Company Limited	Shanghai, China	100
Bayer Thai Co., Ltd.	Bangkok, Thailand	100
Bayer TPU (Shenzhen) Co. Ltd.	Shenzhen, China	100
Bayer Uretech Ltd.	Yu Pu Village, Taiwan	100
Bayer Vietnam Ltd.	Bien Hoa City, Vietnam	100
Bayer Yakuhin, Ltd.	Osaka, Japan	100
Bilag Industries Private Ltd.	Vapi, India	100
Guangzhou Bayer MaterialScience Company Limited	Guangzhou, China	100
Imaxeon Pty. Ltd.	Rydalmere, Australia	100
Medipharm (Pvt) Ltd.	Lahore, Pakistan	100
Medrad Asia Pte. Ltd.	Singapore	100
MEDRAD Medical Equipment Trading Company-Beijing	Beijing, China	100
Nihon Medrad K.K.	Osaka, Japan	100
Nunhems Beijing Seeds Co. Ltd.	Beijing, China	95
Nunhems India Private Limited	Hyderabad, India	100
PT. Bayer Indonesia	Jakarta, Indonesia	99.8
PT. Bayer MaterialScience Indonesia	Jakarta, Indonesia	99.9
Sumika Bayer Urethane Co., Ltd.	Osaka, Japan	60
Latin America/Africa/Middle East		
AgraQuest de México S.A. de C.V.	Mexico City, Mexico	100
Alimtec S.A.	Santiago, Chile	100
Bayer (Proprietary) Limited	Isando, South Africa	100
Bayer Algerie S.P.A.	Algiers, Algeria	100
Bayer Boliviana Ltda	Santa Cruz De La Sierra, Bolivia	100
Bayer de México, S.A. de C.V.	Mexico City, Mexico	100

Fully Consolidated Subsidiaries [Table 4.18 (continued)]

Company Name	Place of Business	Bayer's interest
		%
Bayer East Africa Ltd.	Nairobi, Kenya	55
Bayer Finance & Portfolio Management S.A.	Santiago, Chile	100
Bayer Finance Ltda.	Santiago, Chile	100
Bayer Israel Ltd.	Hod Hasharon, Israel	100
Bayer Middle East FZE	Dubai, United Arab Emirates	100
Bayer Pearl Polyurethane Systems FZCO	Dubai, United Arab Emirates	51
Bayer Pearl Polyurethane Systems LLC	Dubai, United Arab Emirates	49*
Bayer S.A.	Asunción, Paraguay	100
Bayer S.A.	Bogotá, Colombia	100
Bayer S.A.	Buenos Aires, Argentina	100
Bayer S.A.	Caracas, Venezuela	100
Bayer S.A.	Casablanca, Morocco	100
Bayer S.A.	Colón, Panama	100
Bayer S.A.	Guatemala City, Guatemala	100
Bayer S.A.	Lima, Peru	95.2
Bayer S.A.	Managua, Nicaragua	100
Bayer S.A.	Quito, Ecuador	100
Bayer S.A.	San José, Costa Rica	100
Bayer S.A.	Santiago, Chile	100
Bayer S.A.	Santo Domingo, Dominican Republic	100
Bayer S.A.	São Paulo, Brazil	100
Bayer S.A. de C.V.	Tegucigalpa, Honduras	100
Bayer SA	Montevideo, Uruguay	100
Bayer Türk Kimya Sanayi Limited Sirketi	Istanbul, Turkey	100
Bayer, S.A.	San Salvador, El Salvador	100
Corporación Bonima S.A. de C.V.	Ilopango, El Salvador	99.6
Goiânia Investimentos e Participações Ltda	Rio Verde, Brazil	100
Intendis Ilac Ticaret Limited Sirketi	Istanbul, Turkey	100
Mediterranean Seeds Ltd.	Einat, Israel	100
Medrad do Brasil Ltda.	São Paulo, Brazil	100
Medrad Mexicana S. de R.L. de CV	Mexico City, Mexico	100
Nunhems Chile S.A.	Santiago, Chile	100
Nunhems do Brasil Comercio de Sementes Ltda	Campinas, Brazil	100
Nunhems Mexico S.A. de C.V.	Queretaro, Mexico	100
Nunhems Tohumculuk Limited Sirketi	Antalya, Turkey	100
Productos Químicos Naturales, S.A. de C.V.	Orizaba, Mexico	100
Schering do Brasil Química e Farmacêutica Ltda.	São Paulo, Brazil	100
Soytech Seeds Pesquisa em Soja Ltda	Rio Verde, Brazil	99.9

* fully consolidated subsidiary according to IAS 27.4 in conjunction with IAS 27.13

The following three joint ventures were included in the financial statements of the Bayer Group by proportionate consolidation:

Joint Ventures [Table 4.19]

Company Name	Place of Business	Bayer's interest
		%
Bayer IMSA, S.A. de C.V.	Nuevo Leon, Mexico	50
Bayer Zydus Pharma Private Limited	Mumbai, India	50
Indurisk Rückversicherung AG	Luxembourg City, Luxembourg	50

The following associates were accounted for in the consolidated financial statements using the equity method:

Associated Companies [Table 4.20]

Company Name	Place of Business	Bayer's interest
		%
DIC Bayer Polymer Ltd.	Tokyo, Japan	50
Lyondell Bayer Manufacturing Maasvlakte VOF	Rotterdam, Netherlands	50
Paltough Industries (1998) Ltd.	Kibbutz Ramat Yochanan, Israel	25
PO JV, LP	Wilmington, U.S.A.	39.7

The following subsidiaries were reflected in the consolidated financial statements at amortized cost due to their immateriality:

Immaterial Subsidiaries [Table 4.21]

Company Name	Place of Business	Bayer's interest
		%
Europe		
Agreva GmbH	Frankfurt am Main, Germany	100
Ausbildungsinitiative Rheinland GmbH	Leverkusen, Germany	100
Baulé UK Limited	Cheadle Hulme, United Kingdom	100
Bayer 04 Leverkusen Sportförderung gGmbH	Leverkusen, Germany	100
Bayer 04 Marketing GmbH	Leverkusen, Germany	100
Bayer AEH Limited	Cambridge, U.K.	100
Bayer AGCO Limited	Cambridge, U.K.	100
Bayer CropScience Norwich Limited	Cambridge, U.K.	100
Bayer d.o.o. Sarajevo	Sarajevo, Bosnia & Herzegovina	100
Bayer Healthcare S.r.l.	Milan, Italy	100
Bayer MaterialScience A/S	Otterup, Denmark	100
Bayer MaterialScience B.V.	Foxhol, Netherlands	100
Bayer MaterialScience Brunsbüttel Energie GmbH	Brunsbüttel, Germany	100
Bayer MaterialScience Oldenburg Verwaltungs-GmbH	Oldenburg, Germany	100
Bayer MaterialScience s.r.o.	Prague, Czech Republic	100
Bayer OÜ	Tallinn, Estonia	100
Bayer Real Estate Leverkusen Verwaltungs-GmbH	Leverkusen, Germany	100
Bayer Real Estate Waltersdorf Verwaltungs-GmbH	Schönefeld, Germany	100
Bayer UK Limited	Newbury, U.K.	100
Bayer US IP GmbH	Leverkusen, Germany	100
Bayer Verwaltungsgesellschaft mbH	Weimar, Germany	100
Bayer-Unterstützungskasse GmbH	Leverkusen, Germany	100
Bayhealth Comercialização de Produtos Farmacêuticos Unipessoal Lda.	Carnaxide, Portugal	100
Bayhealth, S.L.	Sant Joan Despi, Spain	100
Baysalud, S.L.	Barcelona, Spain	100
Berlex - Especialidades Farmacêuticas Lda	Carnaxide, Portugal	100*
Berlifarma - Especialidades Farmacêuticas, Lda	Carnaxide, Portugal	100*
Berlimed - Especialidades Farmacêuticas Lda	Carnaxide, Portugal	100*
Berlipharm B.V.	Weesp, Netherlands	100
CENTROFARMA-Indústria e Comércio de Prod. Farmacêuticos, Lda.	Carnaxide, Portugal	100
CleanTech NRW GmbH	Leverkusen, Germany	100
Currenta Geschäftsführungs-GmbH	Leverkusen, Germany	100
Dynevo GmbH	Leverkusen, Germany	100
Ehrfeld Mikrotechnik BTS GmbH	Wendelsheim, Germany	100
Epurex Films Geschäftsführungs-GmbH	Bomlitz, Germany	100
Intendis Derma, S.L.	Sant Joan Despi, Spain	100

Immaterial Subsidiaries [Table 4.21 (continued)]

Company Name	Place of Business	Bayer's interest
		%
KOSINUS Grundstücks-Verwaltungsgesellschaft mbH	Berlin, Germany	100
Lilienthalstraße Nr. 4 GmbH	Schönefeld, Germany	100
Lusal Producão Quimico Farmacêutica Luso-Alema, Lda.	Carnaxide, Portugal	100
Lusalfarma - Especialidades Farmacêuticas Lda	Carnaxide, Portugal	100*
Neunte Bayer VV GmbH	Leverkusen, Germany	100
pbi Home & Garden Limited	Cambridge, U.K.	100
Radimetrics UK Ltd.	Kilmarnock, U.K.	100
Schering Agrochemicals Holdings	Newbury, U.K.	100
Schering Health Care Limited	Newbury, U.K.	100
Schering Industrial Products	Newbury, U.K.	100
Secmer SARL	Romans-sur-Isère, France	100
SIA Bayer	Riga, Latvia	100
TecArena+ GmbH	Leverkusen, Germany	100
North America		
Artificial Muscle, Inc.	Sunnyvale, U.S.A.	100
Baulé Inc.	Allentown, U.S.A.	100
Baulé USA LLC	Allentown, U.S.A.	100
Berlex Canada, Inc.	Pointe-Claire, Canada	100
BHCP Holdings LLC	Wilmington, U.S.A.	100
Codena Inc.	St. Charles, Canada	100
Delinting and Seed Treating Company	Maricopa, U.S.A.	100
NippoNex Holdings LLC	Tarrytown, U.S.A.	100
The SDI Divestiture Corporation	Pittsburgh, U.S.A.	100
Viterion TeleHealthcare LLC	Tarrytown, U.S.A.	100
Willow Road Company	Wilmington, U.S.A.	100
Asia/Pacific		
Bayer CropScience (Thailand) Company Limited	Bangkok, Thailand	100
Bayer Malibu Polymers Private Limited	Mumbai, India	51
Bayer MaterialScience (Chongqing) Company Limited	Chongqing, China	100
Bomac Animal Health Pty. Limited	Hornsby, Australia	100
Bomac Laboratories Pty. Limited	Hornsby, Australia	100
Bomac Pty. Ltd.	Hornsby, Australia	100
Bomac Research Pty. Ltd.	Hornsby, Australia	100
Chemdyes Pakistan (Private) Limited	Karachi, Pakistan	100
Myanmar Aventis CropScience Ltd.	Yangon, Myanmar	100
Shanghai Baulé Polyurethane Technology Co. Ltd.	Shanghai, China	100
TianJin Greenstone Polymer Technology Co. Ltd.	Tianjin, China	100
U I M Agrochemicals (Aust) Pty Ltd.	East Hawthorn, Australia	100
Latin America/Africa/Middle East		
AgrEvo South Africa (Pty) Ltd.	Isando, South Africa	100
Bayer Distribuidora de Produtos Químicos e Farmacêuticos Ltda.	São Paulo, Brazil	100
Bayer Imóveis Ltda.	Belford Roxo, Brazil	100
Bayer Parsian AG	Teheran, Iran	100
Bayer Schering Pharma Mocambique, Lda	Maputo, Mozambique	100*
Bayer Zimbabwe (Private) Limited	Harare, Zimbabwe	100
Comercial Interamericana, S.A.	Guatemala City, Guatemala	100
Farmaco Ltda.	São Paulo, Brazil	100
Laboratorio Berlimed S.A.	Santiago, Chile	100
Miles, S.A. Guatemala Branch	Guatemala City, Guatemala	100
Químicas Unidas S.A.	Havana, Cuba	100
Schering (Pty) Ltd.	Midrand, South Africa	100

The following associates and joint ventures were accounted for at amortized cost due to their immateriality:

Immaterial Associates and Joint Ventures [Table 4.22]

Company Name	Place of Business	Bayer's interest
		%
Europe		
Axxam S.p.A.	Milan, Italy	23.2
BaySecur GmbH	Leverkusen, Germany	49
BaySports-Travel GmbH	Leverkusen, Germany	50
BBB Management GmbH Campus Berlin-Buch	Berlin, Germany	20
Disalfarm, S.A.	Barcelona, Spain	33.3
Faserwerke Hüls GmbH	Marl, Germany	50
Healthbox Europe 1 LP	London, U.K.	37
INVITE GmbH	Cologne, Germany	50
PYCO SA	Mont de Marsan, France	47
Sauerstoff- und Stickstoffrohrleitungsgesellschaft mbH	Krefeld, Germany	50
North America		
Technology JV, L.P.	Wilmington, U.S.A.	33.3
Asia/Pacific		
Cotton Growers Services Pty. Limited	Wee Waa, Australia	50
Latin America/Africa/Middle East		
Bayer Middle East Limited Liability Company	Dubai, United Arab Emirates	49
Coopers Environmental Science (Pty) Ltd.	Pomona Gardens, South Africa	26

The Bayer Group held between 5% and 20% of the voting rights of the following "large limited liability companies" as defined in Section 267 Paragraph 3 of the German Commercial Code:

Other Interests in Large Limited Liability Companies [Table 4.23]

Company Name	Place of Business	Bayer's interest
		%
Hokusan Co. Ltd.	Tokyo, Japan	19.8
Instituto Rosenbusch S.A.	Buenos Aires, Argentina	10
PharmLog Pharma Logistik GmbH	Bönen, Germany	16.6

The following domestic subsidiaries availed themselves in 2012 of certain exemptions granted under Section 264 Paragraph 3 and Section 264b of the German Commercial Code regarding the preparation, auditing and publication of financial statements:

German Exempt Subsidiaries [Table 4.24]

Company Name	Place of Business	Bayer's interest
		%
Bayer 04 Immobilien GmbH	Leverkusen, Germany	100
Bayer 04 Leverkusen Fußball GmbH	Leverkusen, Germany	100
Bayer Altersversorgung GmbH	Leverkusen, Germany	100
Bayer Animal Health GmbH	Leverkusen, Germany	100
Bayer Business Services GmbH	Cologne, Germany	100
Bayer Chemicals Aktiengesellschaft	Leverkusen, Germany	100

German Exempt Subsidiaries [Table 4.24 (continued)]

Company Name	Place of Business	Bayer's interest
		%
Bayer CropScience Raps GmbH	Grundhof, Germany	100
Bayer Direct Services GmbH	Leverkusen, Germany	100
Bayer Gastronomie GmbH	Leverkusen, Germany	100
Bayer HealthCare Aktiengesellschaft	Leverkusen, Germany	100
Bayer Innovation GmbH	Leverkusen, Germany	100
Bayer Intellectual Property GmbH	Monheim, Germany	100
Bayer MaterialScience Customer Services GmbH	Leverkusen, Germany	100
Bayer MaterialScience GmbH	Darmstadt, Germany	100
Bayer MaterialScience Oldenburg GmbH & Co. KG	Oldenburg, Germany	100
Bayer Real Estate GmbH	Leverkusen, Germany	100
Bayer Schering Pharma AG	Berlin, Germany	100
Bayer Technology Services GmbH	Leverkusen, Germany	100
Bayer Vital GmbH	Leverkusen, Germany	100
Bayer Weimar GmbH und Co. KG	Weimar, Germany	100
Bayer-Handelsgesellschaft mit beschränkter Haftung	Leverkusen, Germany	100
Chemion Logistik GmbH	Leverkusen, Germany	100
Dritte Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Dritte K-W-A Beteiligungsgesellschaft mbH & Co. oHG	Leverkusen, Germany	100
Drugofa GmbH	Cologne, Germany	100
Epurex Films GmbH & Co. KG	Bomlitz, Germany	100
Erste Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Erste K-W-A Beteiligungsgesellschaft mbH	Leverkusen, Germany	100
Euroservices Bayer GmbH	Leverkusen, Germany	100
Fünfte Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Generics Holding GmbH	Leverkusen, Germany	100
GP Grenzach Produktions GmbH	Grenzach-Wyhlen, Germany	100
Hild Samen GmbH	Marbach, Germany	100
Intendis GmbH	Berlin, Germany	100
Intraserv GmbH & Co. KG	Schönefeld, Germany	100
Jenapharm GmbH & Co. KG	Jena, Germany	100
KOSINUS Grundstücks-Verwaltungsgesellschaft mbH & Co. Gamma OHG	Berlin, Germany	100
KVP Pharma+Veterinär Produkte GmbH	Kiel, Germany	100
Marotrast GmbH	Jena, Germany	100
MENADIER Heilmittel GmbH	Berlin, Germany	100
Pharma-Verlagsbuchhandlung GmbH	Berlin, Germany	100
Schering-Kahlbaum Gesellschaft mit beschränkter Haftung	Berlin, Germany	100
Siebte Bayer VV GmbH	Leverkusen, Germany	100
TECTRION GmbH	Leverkusen, Germany	100
TravelBoard GmbH	Leverkusen, Germany	100
Vierte Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Zweite Bayer Real Estate VV GmbH & Co. KG	Schönefeld, Germany	100
Zweite K-W-A Beteiligungsgesellschaft mbH	Leverkusen, Germany	100

6.2 Business combinations and other acquisitions

ACQUISITIONS IN 2012

Acquisitions are accounted for by the purchase method, the results of the acquired businesses therefore being included in the consolidated financial statements as from the respective dates of acquisition. The purchase prices of acquired companies domiciled outside the eurozone were translated at the exchange rates in effect at the respective dates of acquisition.

Acquisition costs in 2012 amounted to €502 million (2011: €227 million). The purchase prices of the acquired companies or businesses were settled mainly in cash. Total goodwill of €190 million (2011: €103 million) arose on these acquisitions. It related principally to the following transactions:

On March 31, 2012, Bayer acquired the remaining 50% interest in the systems house joint venture Baulé S.A.S., France. This joint venture was formed in 2008 by MaterialScience and Michel Baulé S.A., which was later renamed EXIMIUM S.A.S. Baulé S.A.S. is a global leader in the development, formulation and processing of polyurethane cast elastomers. The purchase price of €50 million pertained mainly to customer relationships and goodwill. The income statement of Baulé S.A.S. was included in the consolidated financial statements by proportionate consolidation for the last time in the first quarter of 2012, whereas its assets and liabilities were already fully consolidated as of March 31, 2012. Following the purchase price allocation, the following assets and liabilities were recognized: goodwill (€39 million), other intangible assets (€55 million), other noncurrent assets (€3 million), inventories and other current assets (€21 million), cash and cash equivalents (€5 million), other liabilities (€8 million) and deferred tax liabilities (€16 million). The revaluation of mainly intangible assets that were previously held by the joint venture resulted in other operating income of €19 million. The fair value of the prior interest was €49 million at the time of the acquisition. Baulé S.A.S. achieved sales of €34 million since the date on which the remaining interest was acquired.

On July 2, 2012, CropScience acquired the watermelon and melon seed business of the U.S. company Abbott & Cobb Inc., headquartered in Feasterville, Pennsylvania. Abbott & Cobb has a robust position in the U.S. watermelon market, with increasing business in Mexico, Australia and Asia. The acquisition significantly strengthens the presence of CropScience in the watermelon and melon market. The melon seed business and the related germplasm add to its existing seed portfolio and provide the basis for new hybrids. A net purchase price of €43 million was agreed, pertaining mainly to germplasm, customer relations and goodwill. Sales of €8 million were recorded since the acquisition date.

On July 3, 2012, CropScience signed an agreement to purchase the U.S. company AgraQuest, Inc., headquartered in Davis, California. AgraQuest is a global supplier of innovative biological pest management solutions based on natural microorganisms. It focuses on discovering, manufacturing and marketing highly effective products for biological pest and disease control to safeguard and increase crop production. The acquisition will help CropScience to build a leading technology platform for biological products and to further strengthen its strategically important fruit and vegetables business. A purchase price of €375 million was agreed, pertaining mainly to the technology platform and goodwill. This amount comprises a one-time payment and potential milestone payments with a total fair value of €31 million. The acquisition received the necessary regulatory approvals and closed on August 15, 2012. AgraQuest had sales of €11 million since the acquisition date.

The acquired businesses named above contributed €42 million to Bayer Group sales in 2012. These portfolio changes had no material effect on EBIT for 2012. A total after-tax result of minus €2 million was recorded for the acquired businesses since the respective dates of their first-time consolidation. This includes the financing costs incurred since the respective acquisition dates.

If these acquisitions had already been made as of January 1, 2012, the Bayer Group would have had total sales of €39,789 million in 2012. Income after taxes would have amounted to €2,478 million, taking into account the effects of the hypothetical financing costs for the full year. Earnings per share would not have been materially affected.

The effects of these and other, smaller acquisitions made in 2012 – and of purchase price adjustments made in 2012 relating to previous years' transactions – on the Group's assets and liabilities are shown in the table. Net of acquired cash and cash equivalents, they resulted in the following cash outflow (disregarding the assets and liabilities that were previously included by proportionate consolidation):

Acquired Assets and Assumed Liabilities [Table 4.25]

	Fair value at the acquisition date
	€ million
Goodwill	190
Patents and technologies	254
Trademarks	15
R&D projects	80
Marketing rights	28
Production rights	4
Software	14
Property, plant and equipment	13
Other noncurrent assets	1
Deferred tax assets	18
Inventories	36
Other current assets	15
Cash and cash equivalents	4
Provisions for pensions and other post-employment benefits	(1)
Other provisions	(3)
Financial liabilities	(1)
Other liabilities	(14)
Deferred tax liabilities	(151)
Net assets	**502**
Acquired cash and cash equivalents	(4)
Liabilities for future payments	(29)
Net cash outflow for acquisitions	**469**

ACQUISITIONS AFTER THE END OF THE REPORTING PERIOD

On January 2, 2013, HealthCare acquired the U.S. company Teva Animal Health Inc. The acquisition broadens HealthCare's range of anti-infective solutions for livestock and expands the existing product offering to include reproductive hormones. The transaction also adds dermatological products for companion animals, pet wellness products and nutraceuticals to the company's portfolio. The parties agreed on a provisional one-time payment of €40 million plus potential milestone payments totaling up to €69 million. The milestone payments are mainly dependent on the achievement of various sales targets and product approvals. The purchase price pertained mainly to product trademarks.

On January 18, 2013, CropScience acquired PROPHYTA Biologischer Pflanzenschutz GmbH, a leading supplier of biological crop protection products headquartered in Malchow on the island of Poel in the German state of Mecklenburg-Western Pomerania. In addition to research and development facilities, the acquisition also includes state-of-the-art production and formulation facilities in the city of Wismar. The acquisition complements the CropScience portfolio and supports the establishment of a leading range of complete agricultural solutions. A provisional one-time payment of €25 million was agreed. The purchase price pertained mainly to technologies, research and development projects and goodwill.

The purchase price allocations for Teva Animal Health Inc. and PROPHYTA Biologischer Pflanzenschutz GmbH currently remain incomplete pending compilation and review of the relevant financial information.

ACQUISITIONS IN 2011

In 2011 the following acquisitions were accounted for in accordance with IFRS 3:

On January 7, 2011, HealthCare acquired the New Zealand-based Bomac group, which supplies a broad range of animal health products for the livestock sector. The net purchase price of €73 million pertained mainly to customer relationships and goodwill.

On April 1, 2011, CropScience acquired Hornbeck Seed Company, Inc., United States. Hornbeck Seed Company supplies soybean, rice, and wheat varieties in the southern United States and has an in-house soybean breeding program and a proprietary soybean germplasm. The net purchase price paid amounted to €30 million and pertained mainly to research and development projects and goodwill.

On August 31, 2011, HealthCare acquired Pathway Medical Technologies, Inc., United States, through its subsidiary MEDRAD, Inc. Pathway Medical Technologies supplies products to mechanically remove arterial plaque. The net purchase price of €88 million pertained mainly to patents and goodwill.

On October 6, 2011, CropScience acquired the oilseed rape seed business of the mid-size seed company Raps GbR, Germany. This mainly includes oilseed rape varieties that are already on the market and the company's breeding material. The net purchase price of €26 million pertained mainly to patented technologies and goodwill.

The effects of these and other, smaller acquisitions made in 2011 on the Group's assets and liabilities in that year as of the respective acquisition dates are shown in the table. Net of acquired cash and cash equivalents, they resulted in the following cash outflow:

Acquired Assets and Assumed Liabilities (Previous Year) [Table 4.26]

	Fair value at the acquisition date
	€ million
Goodwill	103
Patents and technologies	53
Trademarks	4
R&D projects	17
Other rights	22
Property, plant and equipment	10
Other noncurrent assets	(2)
Deferred tax assets	16
Inventories	26
Other current assets	13
Cash and cash equivalents	5
Financial liabilities	(12)
Other liabilities	(13)
Deferred tax liabilities	(16)
Net assets	**226**
Non-controlling interest	1
Purchase prices	**227**
Acquired cash and cash equivalents/financial liabilities	7
Liabilities for future payments	31
Net cash outflow for acquisitions	**265**

6.3 Divestitures and assets held for sale

DIVESTITURES IN 2012

The effects of divestitures made in 2012 and previous years on the consolidated financial statements for 2012 are detailed below.

On April 15, 2012, Bayer entered into an agreement to sell all PET tracer substances to Piramal Imaging SA., Switzerland. This transaction includes the PET tracer florbetaben, which is currently in development for the detection of Alzheimer's disease, the most common form of dementia. Revenue-based milestone and royalty payments were agreed upon.

The agreement with Genzyme Corp., United States, announced in March 2009, comprised the transfer of the hematological oncology portfolio to Genzyme, which was effected in May 2009. We also agreed to transfer the production site for Leukine™ after final inspection by the U.S. Food and Drug Administration (FDA). This inspection took place in March 2012. The agreement concerning the sale of the production site including inventories was signed on May 29, 2012. A purchase price of €71 million was agreed.

We received revenue-based payments of €99 million in 2012 in connection with the aforementioned transfer of the hematological oncology portfolio to Genzyme Corp., United States.

The effects in 2012 of the above divestitures, an additional smaller divestiture and the receipt of a payment pertaining to a transaction effected in the previous year were as follows:

Divestitures [Table 4.27]

	2012
	€ million
Other current assets	1
Assets held for sale	70
Net assets	**71**
Net cash inflow from divestitures	178
Reduction in future cash payments receivable	(103)
Net gain from the divestiture (before taxes)	**4**

DIVESTITURES IN 2011

The contract for the sale of Viverso GmbH to Nuplex Industries Ltd., New Zealand, was signed at the end of October 2011. The acquirer is a leading manufacturer of polymer resins based in New Zealand and Australia. Bayer is thus divesting its business in certain conventional coating resins. The transaction comprises Viverso GmbH including its plants and assets, selected product groups and trademarks. The sale price was €69 million.

ASSETS HELD FOR SALE, AND PROVISIONS DIRECTLY RELATED TO ASSETS HELD FOR SALE

All of the assets held for sale as of December 31, 2011, were sold in 2012. The assets of the production site for Leukine™ were classified in 2012 as assets held for sale and sold within the fiscal year.

Assets Held for Sale and Provisions Directly Related to Assets Held for Sale [Table 4.28]

	2011
	€ million
Noncurrent assets	
Intangible assets	39
Property, plant and equipment	26
	65
Current assets	
Inventories	19
Assets held for sale	**84**
Noncurrent liabilities	
Provisions for pensions and other post-employment benefits	**(3)**
Provisions directly related to assets held for sale	**(3)**

Notes to the Income Statements

7. Net sales

Net sales are derived primarily from product deliveries. Total reported net sales increased by €3,232 million, or 8.8%, from 2011 to €39,760 million in 2012. The increase resulted from the following factors:

Factors in Sales Development [Table 4.29]

	2012	
	€ million	%
Volume	1,713	+4.7
Price	224	+0.6
Currency	1,477	+4.0
Portfolio	(182)	−0.5
Total	**3,232**	**+8.8**

Breakdowns of net sales by segment and by region are given in the table in Note [1].

SEE NOTE [1]

8. Selling expenses

Selling expenses comprise all expenses incurred in the reporting period for the sale, storage and transportation of saleable products, advertising, the provision of advice to customers, and market research. They mainly included €4,600 million (2011: €4,141 million) for the internal and external sales force, €2,273 million (2011: €2,078 million) for advertising and customer advice, €1,322 million (2011: €1,173 million) for the physical distribution and warehousing of finished products, €680 million (2011: €553 million) in commission and licensing expenses, and €1,112 million (2011: €1,013 million) in other selling expenses.

9. Research and development expenses

Research and development expenses and their accounting treatment are defined in Note [4]. Breakdowns of research and development expenses by segment and region are given in Note [1].

SEE NOTES [4], [1]

10. Other operating income

Other operating income was comprised as follows:

Other Operating Income [Table 4.30]

	2011	2012
	€ million	€ million
Gains on retirements of noncurrent assets	195	226
Reversals of impairment losses on receivables	42	28
Reversals of unutilized provisions	50	69
Gains from derivative hedging transactions	138	171
Miscellaneous operating income	434	589
Total	**859**	**1,083**
of which special items	171	288

Gains from the sale of noncurrent assets mainly consisted of a gain of €158 million from the sale of a parcel of land in India. Also included was a €24 million gain from the sale of the fungicidal active ingredient fluoxastrobin to Arysta LifeScience Corporation, Japan. We also incurred a gain of €10 million from the sale of the insecticidal active ingredient carbaryl to Tessenderlo Kerley, Inc., United States. In the HealthCare subgroup, a gain of €22 million was received from the sale of the oncology product clastoban to Bioprojet Pharma S.A.R.L., France.

The miscellaneous operating income included a €16 million impairment loss reversal for a product family in the Pharmaceuticals reporting segment and income of €114 million from adjustments of entitlements to "pension and other post-employment benefits" in the United States. In addition, a gain of €17 million arose from the payment of a break-up fee following termination of the intended acquisition of Schiff Nutrition International, Inc., United States. Also included here was €18 million in compensation payments from insurers following a fire at the Dormagen site.

In 2011, gains from the sale of noncurrent assets included the €76 million gain from the sale of the fungicidal active ingredients iprodione and prochloraz to FMC Corporation, United States, and a €16 million gain from the sale of the herbicidal active ingredient benfuresate to Otsuka AgriTechno Co. Ltd., Japan. The MaterialScience subgroup received a gain of €44 million from the sale of Viverso GmbH to Nuplex Industries Ltd., New Zealand. HealthCare incurred gains totaling €36 million from the sale of the product Control™ to Laboratorio Farmaceutico SIT, Italy, and the sale of the site in Mishawaka, United States, to Siemens.

The miscellaneous operating income in 2011 included a €35 million impairment loss reversal for a product family in the Pharmaceuticals segment and income of €35 million from the remeasurement of pension provisions in the United Kingdom. The HealthCare subgroup also incurred a €22 million one-time gain from the settlement of a patent dispute.

The following table provides a breakdown of the special items included in other operating income by the function to which they relate:

Breakdown of Special Items by Function [Table 4.31]

	2011	2012
	€ million	€ million
Production-related	18	8
Marketing- and distribution-related	4	2
Research- and development-related	13	6
General-administration-related	-	-
Other	136	272
Total	**171**	**288**

11. Other operating expenses

Other operating expenses were comprised as follows:

Other Operating Expenses [Table 4.32]

	2011	2012
	€ million	€ million
Losses on retirements of noncurrent assets	(20)	(26)
Impairment losses on receivables	(62)	(95)
Expenses related to significant legal risks	(260)	(1,298)
Losses from derivative hedging transactions	(130)	(324)
Miscellaneous operating expenses	(1,188)	(1,215)
Total	**(1,660)**	**(2,958)**
of which special items	(1,026)	(2,005)

As in the previous year, other operating expenses mainly comprised expenses related to significant legal risks and miscellaneous operating expenses.

The €1,298 million in expenses for significant legal risks resulted primarily from accounting measures taken in connection with claims concerning Yasmin™/YAZ™ and litigation concerning genetically modified rice (LL RICE).

The miscellaneous operating expenses included €396 million in restructuring expenses, largely consisting of personnel expenses and impairment losses. Of this amount, €182 million was incurred by the HealthCare subgroup, mainly for severance payments. Of the €83 million in restructuring expenses incurred by the CropScience subgroup, personnel expenses accounted for €15 million, impairment losses for €13 million and other expenses for €55 million. MaterialScience incurred restructuring expenses of €50 million. The service areas accounted for a further €81 million in restructuring expenses.

The miscellaneous operating expenses also included impairment losses of €175 million on the product name "Medrad" and €130 million on a patent. As in the previous year, the remaining amount of miscellaneous operating expenses comprised a large number of individually immaterial items at the subsidiaries.

The following table provides a breakdown of the special items included in other operating expenses:

Breakdown of Special Items by Function [Table 4.33]

	2011	2012
	€ million	€ million
Production-related	(230)	(183)
Marketing- and distribution-related	(150)	(217)
Research- and development-related	(139)	(48)
General-administration-related	(64)	(60)
Other	(443)	(1,497)
Total	**(1,026)**	**(2,005)**

12. Personnel expenses and employee numbers

Personnel expenses rose in 2012 by €477 million to €9,203 million (2011: €8,726 million), with higher variable compensation accounting for €186 million of this increase. Changes in exchange rates increased personnel expenses by €220 million.

Personnel Expenses [Table 4.34]

	2011	2012
	€ million	€ million
Salaries	7,054	7,374
Social expenses and expenses for pensions and other benefits	1,672	1,829
of which for defined contribution pension plans	461	481
of which for defined benefit and other pension plans	255	256
Total	**8,726**	**9,203**

The personnel expenses shown here do not contain the interest portion of the allocation to personnel-related provisions – mainly for pensions and other post-employment benefits – which is included in the financial result under other financial expenses (Note [13.3]).

SEE NOTE [13.3]

The average numbers of employees, classified by corporate functions, were as shown in the table below:

Employees [Table 4.35]

	2011	2012
Production	47,674	46,835
Marketing and distribution	41,705	42,590
Research and development	13,451	12,992
General administration	9,629	9,093
Total	**112,459**	**111,510**
Trainees	2,361	2,320

The employees of joint ventures are included in the above figures in proportion to Bayer's interests in the respective companies. The total number of people employed by joint ventures in 2012 was 474 (2011: 283).

The number of employees on either permanent or fixed-term contracts is stated in full-time equivalents, with part-time employees included on a pro-rated basis in line with their contractual working hours. The figures do not include trainees.

13. Financial result

The financial result for 2012 was minus €712 million (2011: minus €786 million), comprising an equity-method loss of €46 million (2011: loss of €45 million), financial expenses of €1,168 million (2011: €1,327 million) and financial income of €502 million (2011: €586 million). Details of the components of the financial result are provided below.

13.1 Income (loss) from investments in affiliated companies

The net loss from investments in affiliated companies was comprised as follows:

Income (Loss) from Investments in Affiliated Companies [Table 4.36]

	2011	2012
	€ million	€ million
Net loss from investments accounted for using the equity method (equity-method loss)	(45)	(46)
Expenses		
Impairment losses on investments in affiliated companies	(12)	(6)
Losses from the sale of investments in affiliated companies	-	(1)
Expenses from investments in affiliated companies and profit and loss transfer agreements (net)	2	(1)
Gains		
Gains from the sale of investments in affiliated companies	10	2
Total	**(45)**	**(52)**

The income from investments in affiliated companies mainly comprised an equity-method loss of €50 million (2011: loss of €48 million) from two joint ventures operated by Lyondell.

Further details of the companies accounted for using the equity method are given in Note [19].

SEE NOTE [19]

13.2 Net interest expense

The net interest expense was comprised as follows:

Net Interest Expense [Table 4.37]

	2011	2012
	€ million	€ million
Expenses		
Interest and similar expenses	(726)	(587)
Interest expenses for derivatives (held for trading)	(172)	(156)
Income		
Interest and similar income	388	317
Interest income from derivatives (held for trading)	175	174
Total	**(335)**	**(252)**

Interest and similar expenses included interest expense of €29 million (2011: €44 million) relating to non-financial liabilities. Interest and similar income included interest income of €10 million (2011: €108 million) from non-financial assets.

The decline in interest and similar expenses was partly due to the reduction in gross financial debt from €11.3 billion to €9.1 billion and to lower euro interest rates.

The change in the liability for redeemable non-controlling interests is reflected in interest income or expense. A €27 million (2011: €5 million) decrease in this liability was recognized as interest income.

13.3 Other financial income and expenses

Other financial income and expenses were comprised as follows:

Other Financial Income and Expenses [Table 4.38]

	2011	2012
	€ million	€ million
Expenses		
Interest portion of interest-bearing provisions	(336)	(320)
Exchange loss	(53)	(69)
Miscellaneous financial expenses	(24)	(28)
Income		
Miscellaneous financial income	7	9
Total	**(406)**	**(408)**

The interest portion of noncurrent interest-bearing provisions mainly related to pension provisions of €271 million (2011: €308 million), including interest of €871 million (2011: €876 million) on pension obligations and an expected return on plan assets of €600 million (2011: €568 million).

14. Income taxes

The breakdown of income taxes by origin was as follows:

Income Tax Expense by Origin [Table 4.39]

	2011	2012
	€ million	€ million
Income taxes paid or accrued		
Germany	(313)	(534)
other countries	(754)	(1,026)
	(1,067)	**(1,560)**
Deferred taxes		
from temporary differences	223	753
from tax loss carryforwards	(28)	53
from tax credits	(19)	2
	176	**808**
Total	**(891)**	**(752)**

The deferred tax assets and liabilities were allocable to the following items in the statement of financial position:

Deferred Tax Assets and Liabilities [Table 4.40]

	Dec.31, 2011		Dec.31, 2012	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
	€ million	€ million	€ million	€ million
Intangible assets	261	2,766	245	2,427
Property, plant and equipment	72	735	69	729
Financial assets	70	175	169	218
Inventories	496	69	586	81
Receivables	64	466	205	451
Other assets	61	13	43	19
Provisions for pensions and other post-employment benefits	1,914	948	2,736	971
Other provisions	653	14	1,042	265
Liabilities	607	55	458	54
Tax loss carryforwards	146	-	212	-
Tax credits	92	-	93	-
	4,436	**5,241**	**5,858**	**5,215**
of which noncurrent	2,938	4,507	4,643	4,950
Set-off	(3,125)	(3,125)	(4,277)	(4,277)
Total	**1,311**	**2,116**	**1,581**	**938**

Deferred tax assets from actuarial gains and losses, recognized outside profit or loss, on defined benefit obligations for pensions and other post-employment benefits increased equity by €876 million (2011: €416 million). Changes in fair values of available-for-sale financial assets and derivatives designated as hedges, recognized outside profit or loss, resulted in deferred tax liabilities that diminished equity by €65 million (2011: deferred tax assets that increased equity by €16 million). These effects on equity are reflected in the statement of comprehensive income.

The use of tax loss carryforwards reduced the income taxes paid or accrued in 2012 by €48 million (2011: €44 million). The use of tax credits reduced income taxes paid or accrued by €20 million (2011: €14 million).

Of the total tax loss carryforwards of €1,302 million in 2012 (2011: €962 million), an amount of €922 million (2011: €582 million) is expected to be usable within a reasonable period. Deferred tax assets of €212 million (2011: €146 million) were therefore recognized on this amount. The deferred tax assets included €18 million (2011: €30 million) that resulted from purchase price allocations and was recognized outside profit or loss.

The use of €380 million (2011: €380 million) of tax loss carryforwards was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount. If these tax loss carryforwards had been fully usable, deferred tax assets of €73 million (2011: €124 million) would have been recognized.

Tax credits of €93 million were recognized in 2012 (2011: €92 million) as deferred tax assets, including €0 million (2011: €1 million) outside profit or loss. The use of €49 million (2011: €54 million) of tax credits was subject to legal or economic restrictions. Consequently, no deferred tax assets were recognized for this amount.

Unusable tax credits and tax loss carryforwards will expire as follows:

Expiration of Unusable Tax Credits and Tax Loss Carryforwards [Table 4.41]

	Tax credits		Tax loss carryforwards	
	Dec. 31, 2011	Dec. 31, 2012	Dec. 31, 2011	Dec. 31, 2012
	€ million	€ million	€ million	€ million
One year	2	24	11	-
Two years	24	-	-	43
Three years	-	-	30	-
Four years	-	-	11	-
Five years	-	-	-	-
Thereafter	28	25	328	337
Total	**54**	**49**	**380**	**380**

In 2012 subsidiaries that reported losses for 2012 or 2011 recognized net deferred tax assets totaling €289 million (2011: €268 million) on temporary differences and tax loss carryforwards. These assets were considered to be unimpaired because the companies concerned were expected to generate taxable income in the future.

Deferred tax liabilities of €23 million were recognized in 2012 (2011: €9 million) for planned dividend payments by subsidiaries. Deferred tax liabilities were not recognized for temporary differences on €10,911 million (2011: €10,017 million) of retained earnings of subsidiaries and associates because the Bayer Group is able to control the timing of the difference reversal and the temporary differences will not reverse in the foreseeable future.

The reported tax expense of €752 million for 2012 (2011: €891 million) differed by €64 million (2011: €107 million) from the expected tax expense of €816 million (2011: €998 million) that would have resulted from applying an expected weighted average tax rate to the pre-tax income of the Group. This average rate, derived from the expected tax rates of the individual Group companies, was 25.1% in 2012 (2011: 29.7%). The weighted expected average tax rate differed considerably from 2011 due to differences in the regional distribution of pre-tax income and the differences in tax rates from one country to another. The effective tax rate was 23.1% (2011: 26.5%).

The reconciliation of expected to reported income tax expense and of the expected to the effective tax rate for the Group was as follows:

Reconciliation of Expected to Actual Income Tax Expense [Table 4.42]

	2011		2012	
	€ million	%	€ million	%
Expected income tax expense and expected tax rate	**998**	**29.7**	**816**	**25.1**
Reduction in taxes due to tax-free income				
Income related to the operating business	(100)	(3.0)	(140)	(4.3)
Income from affiliated companies and divestiture proceeds	(16)	(0.5)	(16)	(0.5)
First-time recognition of previously unrecognized deferred tax assets on tax loss carryforwards	(9)	(0.3)	(26)	(0.8)
Use of tax loss carryforwards on which deferred tax assets were not previously recognized	(1)	-	(21)	(0.6)
Increase in taxes due to non-tax-deductible expenses				
Expenses related to the operating business	111	3.3	135	4.2
Impairment losses on investments in affiliated companies	16	0.5	1	-
New tax loss carryforwards unlikely to be usable	36	1.1	10	0.3
Existing tax loss carryforwards on which deferred tax assets were previously recognized but which are unlikely to be usable	39	1.2	9	0.3
Tax income (–) and expenses (+) relating to other periods	(74)	(2.2)	(15)	(0.5)
Tax effects of changes in tax rates	(23)	(0.7)	(74)	(2.3)
Other tax effects	(86)	(2.6)	73	2.2
Actual income tax expense and effective tax rate	**891**	**26.5**	**752**	**23.1**

15. Income/losses attributable to non-controlling interest

Income attributable to non-controlling interest amounted to €51 million (2011: €12 million), the increase mainly resulting from the sale of a parcel of land in India. Losses attributable to non-controlling interest amounted to €1 million (2011: €10 million).

16. Earnings per share

Earnings per share are determined according to IAS 33 (Earnings per Share) by dividing net income by the weighted average number of ordinary shares in issue during the year.

Earnings per Share [Table 4.43]

	2011	2012
	€ million	€ million
Income after taxes	2,472	2,496
of which attributable to non-controlling interest	2	50
of which attributable to Bayer AG stockholders (net income)	2,470	2,446
	Shares	Shares
Weighted average number of issued ordinary shares	826,947,808	826,947,808
	€	€
Basic earnings per share	2.99	2.96
Diluted earnings per share	2.99	2.96

Notes to the Statements of Financial Position

17. Goodwill and other intangible assets

Changes in intangible assets in 2012 were as follows:

Changes in Intangible Assets [Table 4.44]

	Acquired goodwill	Patents and technologies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or generation, December 31, 2011	**9,181**	**10,527**	**4,054**	**1,237**	**2,074**	**791**	**2,787**	**30,651**
Changes in scope of consolidation	-	2	-	-	-	-	1	3
Acquisitions	190	254	15	28	4	80	14	585
Capital expenditures	-	43	-	56	1	163	179	442
Retirements	(21)	(18)	(7)	(9)	-	(4)	(32)	(91)
Transfers	-	(48)	-	122	-	(123)	58	9
Transfers (IFRS 5)	-	-	-	-	-	-	-	-
Inflation adjustment (IAS 29)	2	-	-	-	-	-	-	2
Remeasurement (IFRS 3)	7	-	-	14	3	-	-	24
Exchange differences	(66)	(26)	(16)	(8)	(3)	(8)	(45)	(172)
December 31, 2012	**9,293**	**10,734**	**4,046**	**1,440**	**2,079**	**899**	**2,962**	**31,453**
Accumulated amortization and impairment losses, December 31, 2011	**21**	**5,290**	**1,774**	**654**	**1,547**	**12**	**1,898**	**11,196**
Changes in scope of consolidation	-	-	-	-	-	-	1	1
Retirements	(21)	(15)	(5)	(8)	-	(4)	(29)	(82)
Amortization and impairment losses in 2012	-	891	347	118	116	5	181	1,658
Amortization	-	759	172	110	116	-	174	1,331
Impairment losses	-	132	175	8	-	5	7	327
Impairment loss reversals	-	(16)	-	-	-	(5)	-	(21)
Transfers	-	(70)	-	-	-	(2)	72	-
Transfers (IFRS 5)	-	-	-	-	-	-	-	-
Exchange differences	-	(7)	(9)	(3)	(2)	-	(35)	(56)
December 31, 2012	**-**	**6,073**	**2,107**	**761**	**1,661**	**6**	**2,088**	**12,696**
Carrying amounts, December 31, 2012	**9,293**	**4,661**	**1,939**	**679**	**418**	**893**	**874**	**18,757**
Carrying amounts, December 31, 2011	**9,160**	**5,237**	**2,280**	**583**	**527**	**779**	**889**	**19,455**

Other rights and advance payments include internally generated software. Costs of €6 million for internally generated software incurred during the application development phase were capitalized in 2012 (2011: €25 million). The carrying amount of internally generated software was €71 million (2011: €94 million).

The research and development projects include €94 million relating to the active ingredient alemtuzumab for the treatment of multiple sclerosis (MS). Bayer has returned the worldwide distribution rights for alemtuzumab to Genzyme Corp., United States. Bayer is continuing to co-develop this drug. If it is approved in the MS indication, Bayer will have global co-promotion rights and will be entitled to royalties and revenue-based milestone payments.

Impairment losses on intangible assets totaled €327 million. As part of a new brand strategy, the company name "Medrad" in the Consumer Health reporting segment, which currently has an indefinite useful life, was reclassified as a product name, resulting in the recognition of a €175 million impairment loss. Also in the Consumer Health segment, a reappraisal of market potential led to the recognition of a €130 million impairment loss on a patent. Impairment losses were recognized on further intangible assets in the Consumer Health segment (€12 million), the CropScience segment (€5 million), the Pharmaceuticals segment (€4 million) and Other Segments (€1 million).

A €16 million impairment loss previously recognized for a product family in the Pharmaceuticals segment was reversed following a reappraisal. In addition, a €5 million impairment loss reversal was recognized on a research and development project in the CropScience segment.

SEE NOTES [6.2], [6.3], [4]

Details of acquisitions, divestitures and assets held for sale are provided in Notes [6.2] and [6.3]. The impairment testing procedure for goodwill and other intangible assets is explained in Note [4].

Changes in intangible assets in 2011 were as follows:

Changes in Intangible Assets (Previous Year) [Table 4.45]

	Acquired goodwill	Patents and technologies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or generation, December 31, 2010	**9,002**	**10,376**	**4,028**	**1,060**	**2,169**	**1,171**	**2,612**	**30,418**
Changes in scope of consolidation	-	-	-	-	-	-	-	-
Acquisitions	103	53	4	-	-	17	22	199
Capital expenditures	-	16	-	167	10	88	153	434
Retirements	-	(40)	(9)	(4)	(8)	(171)	(37)	(269)
Transfers	-	310	-	2	5	(310)	(17)	(10)
Transfers (IFRS 5)	(9)	(212)	(1)	-	(97)	(15)	(3)	(337)
Inflation adjustment (IAS 29)	3	-	-	-	-	-	-	3
Remeasurement (IFRS 3)	-	-	-	-	-	-	-	-
Exchange differences	82	24	32	12	(5)	11	57	213
December 31, 2011	**9,181**	**10,527**	**4,054**	**1,237**	**2,074**	**791**	**2,787**	**30,651**
Accumulated amortization and impairment losses, December 31, 2010	**-**	**4,631**	**1,608**	**566**	**1,493**	**233**	**1,724**	**10,255**
Changes in scope of consolidation	-	-	-	-	-	-	-	-
Retirements	-	(33)	(6)	(2)	(6)	(170)	(33)	(250)
Amortization and impairment losses in 2011	21	805	166	89	159	48	172	1,460
Amortization	-	785	156	89	122	-	159	1,311
Impairment losses	21	20	10	-	37	48	13	149
Impairment loss reversals	-	(30)	(4)	-	-	(1)	-	(35)
Transfers	-	91	-	-	2	(91)	(2)	-
Transfers (IFRS 5)	-	(191)	(1)	-	(97)	(6)	(3)	(298)
Exchange differences	-	17	11	1	(4)	(1)	40	64
December 31, 2011	**21**	**5,290**	**1,774**	**654**	**1,547**	**12**	**1,898**	**11,196**
Carrying amounts, December 31, 2011	**9,160**	**5,237**	**2,280**	**583**	**527**	**779**	**889**	**19,455**
Carrying amounts, December 31, 2010	**9,002**	**5,745**	**2,420**	**494**	**676**	**938**	**888**	**20,163**

Changes in the carrying amounts of goodwill for the reporting segments in 2012 and 2011 were as follows:

Goodwill by Reporting Segment [Table 4.46]

	Pharma-ceuticals	Consumer Health	HealthCare	Crop-Science	Material-Science	Bayer Group
	€ million	€ million	€ million	€ million	€ million	€ million
Carrying amounts, January 1, 2011	**4,671**	**2,327**	**6,998**	**1,791**	**213**	**9,002**
Changes in scope of consolidation	-	-	-	-	-	-
Acquisitions	-	68	68	35	-	103
Retirements	-	-	-	-	-	-
Impairment losses in 2011	(21)	-	(21)	-	-	(21)
Transfers	-	-	-	-	-	-
Transfers (IFRS 5)	(9)	-	(9)	-	-	(9)
Inflation adjustment (IAS 29)	-	3	3	-	-	3
Remeasurement (IFRS 3)	-	-	-	-	-	-
Exchange differences	23	38	61	18	3	82
Carrying amounts, December 31, 2011	**4,664**	**2,436**	**7,100**	**1,844**	**216**	**9,160**
Changes in scope of consolidation	-	-	-	-	-	-
Acquisitions	-	8	8	162	20	190
Retirements	-	-	-	-	-	-
Impairment losses in 2012	-	-	-	-	-	-
Transfers	1	(1)	-	-	-	-
Transfers (IFRS 5)	-	-	-	-	-	-
Inflation adjustment (IAS 29)	-	2	2	-	-	2
Remeasurement (IFRS 3)	-	-	-	-	7	7
Exchange differences	(17)	(25)	(42)	(23)	(1)	(66)
Carrying amounts, December 31, 2012	**4,648**	**2,420**	**7,068**	**1,983**	**242**	**9,293**

Goodwill and other intangible assets with an indefinite useful life that are of material significance for the Bayer Group are allocated to the following cash-generating units or groups of cash-generating units:

Intangible Assets with Indefinite Useful Life [Table 4.47]

Reporting segment	Cash-generating unit / Group of cash-generating units	Goodwill	Important intangible assets with indefinite useful life
		€ million	€ million
Pharmaceuticals	Pharmaceuticals	4,648	552
Consumer Health	Radiology and Interventional	1,253	82
Consumer Health	OTC	989	22
CropScience	Crop Protection	1,294	76
CropScience	Seeds	320	112

Since it is uncertain whether acquired or inlicensed research and development projects will eventually result in the production of saleable products, the period over which the corresponding capitalized asset is expected to generate an economic benefit for the company cannot be determined. Development projects were capitalized at a total amount of €893 million as of the end of 2012 (2011: €779 million).

The Bayer Cross, which was reacquired for the North America region in 1994, having been awarded to the United States and Canada under the reparations agreements at the end of the First World War, is recognized as an intangible asset with an indefinite useful life. The period for which the Bayer Group will derive an economic benefit from this name cannot be determined as Bayer intends to make continuous use of it. The Bayer Cross is capitalized at €107 million.

PATENTS AND TECHNOLOGIES

The Bayer Group endeavors to obtain patent protection for its products and technologies in the major markets. Depending on the jurisdiction, patent protection may be available for:

- individual active ingredients,
- specific compounds, formulations and combinations containing active ingredients,
- manufacturing processes,
- working methods,
- equipment,
- intermediates for the manufacture of active ingredients and products,
- isolated genes or proteins,
- new uses for existing active ingredients or products,
- material combinations and
- semi-finished products.

The protection that a patent provides varies from country to country, depending on the type of claim granted, the scope of the claim's coverage and the legal remedies available for enforcement.

The Bayer Group currently owns some 76,000 patents or patent applications. Although in our Pharmaceuticals segment the patents on Avalox™/Avelox™, Betaferon™/Betaseron™, Eylea™/Eylia™, Kogenate™, Levitra™, Magnevist™, Mirena™, Nexavar™, Stivarga™, Xarelto™, YAZ™, Yasmin™ and Yasminelle™ are particularly important to our business, we believe that no single patent (or group of related patents) is crucial to our business as a whole.

TERM AND EXPIRATION OF PATENTS

Patents are valid for varying periods, depending on the laws of the jurisdiction granting the patent. In some jurisdictions, patent protection begins from the date a patent application was filed; in others, it begins on the date the patent is granted.

The European Union member countries as well as the United States, Japan and certain other countries extend patent terms or issue supplementary protection certificates to compensate for patent term loss due to regulatory review and for the substantial investments in product research and development. We endeavor to obtain such patent term extensions or supplementary certificates wherever possible. Apart from substance and product patents, we continue to seek

- patents on processes and intermediates used in manufacturing an active ingredient,
- patents relating to specific uses for an active ingredient,
- patents relating to novel compositions and formulations, and
- market exclusivity in countries where this is possible (such as the United States).

The following table sets forth the expiration dates in our major markets of the most important patents covering Avalox™/Avelox™, Betaferon™/Betaseron™, Eylea™, Kogenate™, Levitra™, Magnevist™, Mirena™, Nexavar™, Stivarga™, Xarelto™, YAZ™, Yasmin™ and Yasminelle™:

Expiration Dates of Most Important Patents [Table 4.48]

	Market								
	Germany	France	U.K.	Italy	Spain	Japan	China	U.S.A.	Canada
Products									
Avalox™/Avelox™									
Active ingredient	2014	2014	2014	2014	2014	2014	2013	2014	2015
Active ingredient monohydrate	2016	2016	2016	2016	2016	2016	2016	2016	2016
Tablets	2019	2019	2019	2019	2019	2019	2019	2019	2019
Betaferon™/Betaseron™									
Active ingredient	-	-	-	-	-	-	-	-	2016
Eylea™/Eylia™									
Active ingredient	2020	2020	2020	2020	2020	2020[a]	2020	-	2020
Kogenate™									
Active ingredient	-	-	-	-	-	-	-	2014	2019
Formulation	2017	2017	2017	2017	2017	2017	2017	2017	2017
Levitra™									
Active ingredient	2018	2018	2018	2018	2018	2020	2018	2018	2018
Magnevist™									
Process	-	-	-	-	-	-	-	2013	-
Mirena™									
Applicator	2015	2015	2015	2015	2015	-	2015	2015	2015
Process	2013	2013	2013	2013	2013	2013	2013	2013	2013
Nexavar™									
Active ingredient	2020[a]	2021	2021	2021	2021	2020[a]	2020	2020	2020
Stivarga™									
Active ingredient	2024	2024	2024	2024	2024	2024	2024[b]	2024[b]	2024[b]
Xarelto™									
Active ingredient	2020[a]	2023	2023[c]	2023	2023	2020[a]	2020	2021[a]	2020
YAZ™									
Formulation	2020[c,d]	2020[c,d]	2020[c,d]	2020[c,d]	2020[c,d]	2021[a]	2020	-	2020
Dosage regimen	-	-	-	-	-	2014[b]	-	2014	2014
Production process	2025	2025	2025	2025	2025	2026[b]	2026	2025	2026[b]
Yasmin™									
Formulation	2020[d]	2020[d]	2020[d]	2020[d]	2020[d]	2020	2020	-	2020
Production process	2025	2025	2025	2025	2025	2026[b]	2026	2025	2026[b]
Yasminelle™									
Formulation	2020[d]	2020[d]	2020[d]	2020[d]	2020[d]	2020	2020	-	2020
Production process	2025	2025	2025	2025	2025	2026[b]	2026	2025	2026[b]

[a] Current patent expiration. Extension applied for.
[b] Patent pending
[c] Patent expiry date updated
[d] The patent was revoked by an Opposition Division of the European Patent Office in December 2011. Bayer has appealed the decision. The appeal has suspensive effect.

SEE NOTE [32]

Information on specific patent disputes is given in Note [32].

TRADEMARKS

We seek to obtain extensive trademark protection for our products in all jurisdictions in which they are marketed or are to be marketed in the near future. As well as product names, we also register particularly distinctive slogans, logos, graphic elements and designs as global trademarks.

Wherever possible, trademarks are registered through supranational trademark protection systems, for example as European Community Trademarks or international trademarks, and additionally with the national trademark registration offices. The protection actually provided by a trademark may vary considerably from one country to another depending on the distinctiveness of the trademark.

Our trademarks include:

HealthCare: Adalat™, Advantage™, Aleve™/Flanax™/Apronax™, Alka-Seltzer™, Aspirin™, Avalox™/Avelox™, Baytril™, Bepanthen™/Bepanthol™, Berocca™, Betaferon™/Betaseron™, Canesten™, Ciprobay™/Ciproxin™/Baycip™/Cipro™, Contour™, Diane™, Eylea™/Eylia™, Gadovist™, Glucobay™, Kogenate™, Levitra™, Magnevist™, Mirena™, Nexavar™, One A Day™, Redoxon™, Rennie™, Stivarga™, Supradyn™, Ultravist™, Xarelto™, YAZ™, Yasmin™, Yasminelle™ and Zetia™.

CropScience: Basta™/Liberty™, Bayer Garden™/Bayer Advanced™, Belt™, Confidor™, FiberMax™/Stoneville™, Fox™, Gaucho™, InVigor™, Movento™, Nativo™, Nunhems™, Poncho™, Prosaro™, Sakura™, Votivo™ and Xpro™.

MaterialScience: Bayblend™, Desmodur™, Desmopan™, Desmophen™, Makrolon™ and Vulkollan™.

We currently have more than 61,000 national trademark registrations or pending registrations, along with over 800 Community Trademarks, which are valid throughout the European Union, and some 1,900 international trademarks, which provide protection in various countries. Trademarks are particularly important for those products that are not protected by patents and are exposed to strong competitive pressure from generic products. However, with the exception of the company name “Bayer” and the “Bayer Cross” logo, we do not believe that any single trademark is crucial to our business as a whole.

18. Property, plant and equipment

Changes in property, plant and equipment in 2012 were as follows:

Changes in Property, Plant and Equipment [Table 4.49]

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or construction, December 31, 2011	**8,361**	**15,978**	**1,784**	**953**	**27,076**
Changes in scope of consolidation	-	(1)	(3)	1	(3)
Acquisitions	2	10	-	1	13
Capital expenditures	142	321	182	925	1,570
Retirements	(246)	(276)	(130)	(12)	(664)
Transfers	126	345	26	(506)	(9)
Transfers (IFRS 5)	(65)	(14)	(2)	-	(81)
Inflation adjustment (IAS 29)	1	1	-	-	2
Remeasurement (IFRS 3)	-	-	-	-	-
Exchange differences	(69)	(162)	(19)	(21)	(271)
December 31, 2012	**8,252**	**16,202**	**1,838**	**1,341**	**27,633**
Accumulated depreciation and impairment losses, December 31, 2011	**4,490**	**11,445**	**1,308**	**10**	**17,253**
Changes in scope of consolidation	1	-	(2)	-	(1)
Retirements	(217)	(260)	(121)	(10)	(608)
Depreciation and impairment losses in 2012	303	827	188	5	1,323
Depreciation	283	811	188	-	1,282
Impairment losses	20	16	-	5	41
Impairment loss reversals	-	-	-	-	-
Transfers	-	5	(5)	-	-
Transfers (IFRS 5)	(18)	(5)	(1)	-	(24)
Exchange differences	(41)	(118)	(13)	(1)	(173)
December 31, 2012	**4,518**	**11,894**	**1,354**	**4**	**17,770**
Carrying amounts, December 31, 2012	**3,734**	**4,308**	**484**	**1,337**	**9,863**
Carrying amounts, December 31, 2011	**3,871**	**4,533**	**476**	**943**	**9,823**

Impairment losses recognized on property, plant and equipment in 2012 totaled €41 million and included €17 million pertaining to a pharmaceutical research facility in the United States. The remaining impairment losses were recognized in the CropScience segment (€10 million), the MaterialScience segment (€7 million), the Consumer Health segment (€3 million), the Pharmaceuticals segment (€2 million) and Other Segments (€2 million). They included €10 million resulting from the subgroups' restructuring programs.

The total capital expenditures of €1,570 million (2011: €1,232 million) for property, plant and equipment included €218 million (2011: €221 million) in China.

In 2012 borrowing costs of €20 million (2011: €23 million) were capitalized as components of the cost of acquisition or construction of qualifying assets, applying an average interest rate of 3.8% (2011: 4.5%).

Capitalized property, plant and equipment included assets with a total net value of €447 million (2011: €463 million) held under finance leases. The cost of acquisition or construction of these assets as of the closing date totaled €1,185 million (2011: €1,177 million). They comprised plant installations and machinery with a carrying amount of €204 million (2011: €216 million), buildings with a carrying amount of €126 million (2011: €135 million) and other property, plant and equipment with a carrying amount of €117 million (2011: €112 million). For information on the liabilities arising from finance leases see Note [27].

SEE NOTE [27]

In 2012 rental payments of €226 million (2011: €239 million) were made for assets leased under operating leases as defined in IAS 17 (Leases).

Lease payments of €6 million are expected to be received in 2013 from operating leases – as defined in IAS 17 (Leases) – pertaining to property, plant and equipment. Lease payments totaling €7 million are expected to be received in 2014-2017 and lease payments totaling €2 million after 2017.

In 2008 Bayer sold a registered usufructuary right to real estate to a leasing company and leased it back immediately under an agreement that includes a right of repurchase upon expiration of the lease. The carrying amount of the real estate in 2012 was €140 million (2011: €146 million). This transaction, which was accounted for as a secured loan, does not restrict the operational use of the real estate.

INVESTMENT PROPERTY

In 2012 changes were made to the utilization concept for land and buildings as part of the restructuring of Bayer Real Estate GmbH, a wholly owned subsidiary of Bayer AG. These changes resulted for the first time in the clear identification of the land and buildings owned by the Bayer Group but not being used for business purposes.

The total carrying amount of the investment property held by Bayer as of December 31, 2012 was €90 million. This property mainly comprised buildings and unused land outside of the chemical parks that is leased to third parties. Its total fair value was €236 million. The rental income from investment property was €21 million. The related operating expenses amounted to €4 million.

Changes in property, plant and equipment in 2011 were as follows:

Changes in Property, Plant and Equipment (Previous Year) [Table 4.50]

	Land and buildings	Plant installations and machinery	Furniture, fixtures and other equipment	Construction in progress and advance payments	Total
	€ million	€ million	€ million	€ million	€ million
Cost of acquisition or construction, December 31, 2010	**8,192**	**15,079**	**1,700**	**1,291**	**26,262**
Changes in scope of consolidation	(2)	(4)	1	(1)	(6)
Acquisitions	6	2	2	-	10
Capital expenditures	129	432	167	504	1,232
Retirements	(121)	(334)	(131)	(3)	(589)
Transfers	168	627	40	(825)	10
Transfers (IFRS 5)	(105)	(83)	(8)	-	(196)
Inflation adjustment (IAS 29)	1	1	-	-	2
Remeasurement (IFRS 3)	-	-	-	-	-
Exchange differences	93	258	13	(13)	351
December 31, 2011	**8,361**	**15,978**	**1,784**	**953**	**27,076**
Accumulated depreciation and impairment losses, December 31, 2010	**4,333**	**10,844**	**1,235**	**15**	**16,427**
Changes in scope of consolidation	-	(3)	1	(1)	(3)
Retirements	(93)	(309)	(121)	-	(523)
Depreciation and impairment losses in 2011	292	859	193	2	1,346
Depreciation	252	770	188	-	1,210
Impairment losses	40	89	5	2	136
Impairment loss reversals	(2)	-	-	-	(2)
Transfers	1	5	(1)	(5)	-
Transfers (IFRS 5)	(85)	(77)	(8)	-	(170)
Exchange differences	44	126	9	(1)	178
December 31, 2011	**4,490**	**11,445**	**1,308**	**10**	**17,253**
Carrying amounts, December 31, 2011	**3,871**	**4,533**	**476**	**943**	**9,823**
Carrying amounts, December 31, 2010	**3,859**	**4,235**	**465**	**1,276**	**9,835**

The following table provides an overview of the main sites operated by each subgroup:

Principal Subgroup Sites [Table 4.51]

Location	Main activities
HealthCare	
Leverkusen, Germany	HealthCare headquarters, administration, formulation and packaging of pharmaceutical products
Bergkamen, Germany	Active ingredient production
Berlin, Germany	Production and packaging of contrast agents, packaging of solids, research and development, administration
Bitterfeld-Wolfen, Germany	Formulation and packaging of Consumer Care products
Wuppertal, Germany	Production of active ingredients for pharmaceutical products, research and development
Turku, Finland	Production of gynecological and andrological products, solids (oncology), research and development
Berkeley, U.S.A.	Production, formulation and packaging of recombinant Factor VIII
Emeryville, U.S.A.	Production and formulation of Betaferon™/Betaseron™
Myerstown, U.S.A.	Formulation and packaging of Consumer Care products
CropScience	
Monheim, Germany	CropScience headquarters, administration, research and development for fungicides and insecticides
Dormagen, Germany	Development of new production processes and manufacture of products for Crop Protection and Environmental Science
Frankfurt am Main, Germany	Research and development for herbicides, manufacture of products for Crop Protection and Environmental Science
Ghent, Belgium	Research and development for seeds and agricultural crop traits
Haelen, Netherlands	Research, development and production of vegetable seeds
Kansas City, U.S.A.	Manufacture of products for Crop Protection and Environmental Science
Knapsack, Germany	Manufacture of products for Crop Protection and Environmental Science
Research Triangle Park, U.S.A.	Headquarters North America, research and development for seeds and traits of agricultural crops
Vapi, India	Development of new production processes and manufacture of products for Crop Protection and Environmental Science
MaterialScience	
Leverkusen, Germany	MaterialScience headquarters, administration, research and development, production of base and modified isocyanates, chlorine, sodium hydroxide solution, hydrogen, hydrochloric acid
Brunsbüttel, Germany	Production of diphenylmethane diisocyanate, toluene diisocyanate, chlorine, hydrogen, hydrochloric acid
Dormagen, Germany	Production of modified isocyanates, resins, polycarbonate films, toluene diisocyanate, polyether, thermoplastic polyurethanes, chlorine, sodium hydroxide solution, hydrogen, hydrochloric acid, nitric acid
Krefeld, Germany	Production of polycarbonates, diphenylmethane diisocyanate, chlorine, sodium hydroxide solution, hydrogen, hydrochloric acid
Antwerp, Belgium	Production of polycarbonates, polyether
Tarragona, Spain	Production of diphenylmethane diisocyanate, hydrochloric acid
Baytown, U.S.A.	Production of base and modified isocyanates, polycarbonates,diphenyl-methane diisocyanate, toluene diisocyanate, chlorine, sodium hydroxide solution, hydrogen, hydrochloric acid, nitric acid
Map Ta Phut, Thailand	Production of polycarbonates, polycarbonate films
Shanghai, China	Research and development, production of base and modified isocyanates, resins, polycarbonates, diphenylmethane diisocyanate, toluene diisocyanate, chlorine, hydrochloric acid, nitric acid

19. Investments accounted for using the equity method

Changes in the carrying amounts of the Group's interests in associates accounted for using the equity method were as follows:

Changes in Carrying Amounts of Investments Accounted for Using the Equity Method [Table 4.52]

	2011	2012
	€ million	€ million
Carrying amounts, January 1	**354**	**319**
Acquisitions	-	-
Other additions	8	16
Divestitures	-	-
Miscellaneous retirements	(4)	-
Equity-method loss after taxes	(45)	(46)
Exchange differences	6	(5)
Carrying amounts, December 31	**319**	**284**

These interests relate exclusively to the MaterialScience subgroup, which holds them for strategic reasons.

In 2000 Bayer acquired the polyols business and parts of the propylene oxide (PO) production operations of Lyondell Chemicals with the objective of ensuring access to patented technologies and safeguarding the long-term supply of PO, a starting product for polyurethane, at reasonable prices. As part of this strategy, two companies were established to produce PO (PO JV, LP, United States, in which Bayer holds a 39.7% interest, and Lyondell Bayer Manufacturing Maasvlakte VOF, Netherlands, in which Bayer holds a 50% interest). The production facilities of both companies are operated by Lyondell. Bayer benefits from fixed long-term supply quotas/volumes of PO based on fixed price components.

The following tables present a summary of the aggregated items of the income statements and statements of financial position of the associates that are accounted for using the equity method in the consolidated financial statements of the Bayer Group.

Aggregated Income Statement Data of Investments Accounted for Using the Equity Method [Table 4.53]

	2011	2012
	€ million	€ million
Net sales	1,267	1,239
Gross profit	(33)	(10)
Net loss	(99)	(90)
Share of pre-tax loss	(47)	(42)
Pre-tax loss from investments accounted for using the equity method	**(47)**	**(42)**
Pre-tax gain (loss) from impairments/derecognition of other interests	2	(4)
Recognized pre-tax loss from investments accounted for using the equity method (equity-method loss)	**(45)**	**(46)**

Aggregated Data from the Statements of Financial Position of Investments Accounted for Using the Equity Method [Table 4.54]

	Dec. 31, 2011	Dec. 31, 2012
	€ million	€ million
Noncurrent assets	680	579
Current assets	221	269
Noncurrent liabilities	12	12
Current liabilities	136	167
Equity	753	669
Share of equity	306	265
Other	13	19
Carrying amount of investments accounted for using the equity method	**319**	**284**

The item "Other" mainly comprised differences arising from adjustments of data to Bayer's uniform accounting policies, purchase price allocations and their amortization in income.

20. Other financial assets

Other financial assets were comprised as follows:

Other Financial Assets [Table 4.55]

	Dec. 31, 2011		Dec. 31, 2012	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Loans and receivables	2,735	1,931	840	87
Available-for-sale financial assets	757	580	361	133
of which debt instruments	628	580	252	133
of which equity instruments	129	-	109	-
Held-to-maturity financial investments	109	10	102	10
Non-derivative held-for-trading financial assets	-	-	196	196
Receivables from forward and option commodity contracts	20	20	11	11
Receivables from other derivatives	492	243	636	394
Receivables under lease agreements	35	-	34	25
Total	**4,148**	**2,784**	**2,180**	**856**

The loans and receivables mainly comprised capital with a nominal volume of €595 million (2011: €595 million) provided to Bayer-Pensionskasse VVaG (Bayer-Pensionskasse) for its effective initial fund, and jouissance right capital (Genussrechtskapital) with a nominal volume of €150 million (2011: €150 million), also provided to Bayer-Pensionskasse. Bank deposits were reduced to €19 million (2011: €1,905 million), mainly to repay the €2,000 million EMTN bond in April 2012.

The debt instruments reported as available-for-sale financial assets mainly comprised German treasury bills in the amount of €125 million (2011: €127 million). These treasury bills, which were lent to a bank, continue to be recognized as available-for-sale financial assets because the related risks and rewards remain with Bayer. Upon maturity or redemption of the treasury bills, Bayer is obligated to replace them with German government securities until 2016.

The equity instruments reported as available-for-sale financial assets included €32 million (2011: €41 million) in instruments whose fair value could not be determined from a stock exchange or other market price or by discounting reliably determinable future cash flows. These equity instruments were recognized at amortized cost.

In 2012 impairment losses totaling €6 million (2011: €12 million) on available-for-sale financial assets were recognized in profit or loss.

Non-derivative securities in the amount of €196 million (2011: €0 million), reflected in financial assets held for trading, served to diversify current investments. These securities were held for short-term sale as part of our liquidity management.

Unimpaired other financial assets of €10 million (2011: €5 million) were past due on the closing date.

SEE NOTE [30]

Further information on the accounting for receivables from derivatives is given in Note [30].

Receivables under lease agreements relate to finance leases where Bayer is the lessor and the lessee is the economic owner of the leased assets. These receivables comprised expected lease payments of €75 million (2011: €77 million), including €41 million (2011: €42 million) in interest. Of the expected lease payments, €26 million (2011: €2 million) is due within one year, €4 million (2011: €30 million) within the following four years and €45 million (2011: €45 million) in subsequent years.

21. Inventories

Inventories were comprised as follows:

Inventories [Table 4.56]

	Dec. 31, 2011	Dec. 31, 2012
	€ million	€ million
Raw materials and supplies	1,223	1,347
Work in process, finished goods and goods purchased for resale	5,138	5,620
Advance payments	7	13
Total	**6,368**	**6,980**

Impairment losses recognized on inventories were reflected in the cost of goods sold. They were comprised as follows:

Impairments of Inventories [Table 4.57]

	2011	2012
	€ million	€ million
Accumulated impairment losses, January 1	**(374)**	**(404)**
Changes in scope of consolidation	-	-
Impairment losses in the reporting period	(185)	(209)
Impairment loss reversals or utilization	154	223
Exchange differences	1	5
Accumulated impairment losses, December 31	**(404)**	**(385)**

22. Trade accounts receivable

Trade accounts receivable less impairment losses amounted to €7,431 million (2011: €7,061 million) on the closing date and were comprised as follows:

Trade Accounts Receivable [Table 4.58]

	2011	2012
	€ million	€ million
Trade accounts receivable (before impairments)	7,304	7,671
Accumulated impairment losses	(243)	(240)
Carrying amount, December 31	**7,061**	**7,431**
of which noncurrent	12	10

Changes in impairment losses on trade accounts receivable were as follows:

Impairments of Trade Accounts Receivable [Table 4.59]

	2011	2012
	€ million	€ million
Accumulated impairment losses, January 1	**(278)**	**(243)**
Changes in scope of consolidation	-	-
Impairment losses in the reporting period	(52)	(66)
Impairment loss reversals or utilization	77	60
Exchange differences	10	9
Accumulated impairment losses, December 31	**(243)**	**(240)**

Trade accounts receivable amounting to €7,320 million (2011: €6,984 million) were not individually impaired. Of this amount, €1,095 million (2011: €1,048 million) was past due or due immediately on the closing date.

The amounts of impaired and past-due trade accounts receivable are summarized in the following table:

Impaired and Past-Due Trade Accounts Receivable [Table 4.60]

		Of which neither impaired nor past due at the closing date	Of which unimpaired but past due at the closing date				Of which impaired at the closing date
	Carrying amount		up to 3 months	3–6 months	6–12 months	more than 12 months	
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
December 31, 2012	7,431	6,225	743	144	104	104	111
December 31, 2011	7,061	5,936	595	156	121	176	77

The gross carrying amount of individually impaired trade accounts receivable was €248 million (2011: €180 million). The impairment losses recognized on these assets totaled €137 million (2011: €103 million), resulting in a net carrying amount of €111 million (2011: €77 million).

The unimpaired receivables were deemed to be collectible on the basis of established credit management processes and individual assessments of customer risks. The impairment losses recognized included an appropriate allowance for default risk.

Receivables from government health service institutions, especially in Greece, Italy, Portugal and Spain, are under special observation in view of the government debt crisis. Although there were no material defaults on such receivables in 2012 or 2011, it is possible that future developments in these countries could result in payment delays and/or defaults. This could necessitate the recognition of impairment losses due to new occurrences. Trade accounts receivable from government health service institutions in the above countries at the end of 2012 totaled €240 million (2011: €341 million).

Credit insurance existed for selected credit portfolios of the HealthCare and CropScience subgroups (10% and 19% of sales, respectively), with regional variations in coverage. A further amount of receivables was secured by advance payments, letters of credit and guarantees, and €255 million (2011: €273 million) of receivables in Brazil were secured by liens on land, buildings and harvest yields.

23. Other receivables

Other receivables, after impairment losses of €60 million (2011: €61 million), were comprised as follows:

Other Receivables [Table 4.61]

	Dec. 31, 2011		Dec. 31, 2012	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Benefit plan assets in excess of obligation	72	-	27	-
Receivables from employees	46	46	43	43
Other tax receivables	480	414	559	471
Deferred charges	246	216	230	202
Reimbursement claims	425	420	607	599
Miscellaneous receivables	784	532	723	333
Total	**2,053**	**1,628**	**2,189**	**1,648**

The reimbursement claims of €607 million (2011: €425 million) consisted mainly of claims for compensation payments from insurance companies in connection with product liability. In addition, a miscellaneous receivable of €25 million (2011: €124 million) existed from the sale of the hematological oncology portfolio – Campath™/MabCampath™, Fludara™ and Leukine™ – to Genzyme Corp., United States. The decrease in the amount of the receivable was mainly due to revenue-based payments received during the year.

Of the €633 million (2011: €713 million) in financial receivables included in other receivables, €605 million (2011: €582 million) was unimpaired. Of this amount, €221 million (2011: €157 million) was past due or due immediately on the closing date. The gross carrying amount of individually impaired other receivables was €88 million (2011: €192 million). The impairment losses recognized on these assets totaled €60 million (2011: €61 million), resulting in a net carrying amount of €28 million (2011: €131 million).

The amounts of impaired and past-due financial receivables included in other receivables are summarized in the following table:

Impaired and Past-Due Other Financial Receivables [Table 4.62]

		Of which neither impaired nor past due at the closing date	Of which unimpaired but past due at the closing date				Of which impaired at the closing date
	Carrying amount		up to 3 months	3–6 months	6–12 months	more than 12 months	
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
December 31, 2012	633	384	172	17	13	19	28
December 31, 2011	713	425	84	14	31	28	131

24. Equity

The foremost objectives of our financial management are to help bring about a sustained increase in the value of the Bayer Group for the benefit of all stakeholders, and to ensure the Group's creditworthiness and liquidity. The pursuit of these goals means reducing our cost of capital, optimizing our capital structure, improving our financing cash flow and effectively managing risk.

The rating agencies commissioned by Bayer assess the creditworthiness of the Bayer Group as follows:

Rating [Table 4.63]

	Long-term rating	Outlook	Short-term rating
Standard & Poor's	A–	positive	A–2
Moody's	A3	stable	P–2

These investment-grade ratings reflect the company's good creditworthiness and ensure access to a broad investor base for financing purposes. Bayer's capital management strategy is based on the debt ratios published by the rating agencies, which – by somewhat differing methods – look at the cash flow for a given period in relation to debt. The financial strategy of the Bayer Group focuses on an "A" rating and on preserving our financial flexibility. Apart from utilizing cash inflows from our operating business to reduce net financial debt, we are implementing our financial strategy by way of vehicles such as the subordinated hybrid bond issued in July 2005, the authorized and conditional capital amounts created by resolutions of the Annual Stockholders' Meeting, and a potential share buyback program. Bayer's Articles of Incorporation do not stipulate capital ratios.

The changes in the various components of equity during 2011 and 2012 are shown in the Bayer Group statement of changes in equity.

CAPITAL STOCK

The capital stock of Bayer AG on December 31, 2012 amounted to €2,117 million (2011: €2,117 million), divided into 826,947,808 (2011: 826,947,808) registered shares, and was fully paid in. Each share confers one voting right.

AUTHORIZED CAPITAL

Authorized capital of €530 million was approved by the Annual Stockholders' Meeting on April 30, 2010. It expires on April 29, 2015. It can be used to increase the capital stock by issuing new no-par registered shares against cash contributions and/or contributions in kind, but capital increases against contributions in kind may not exceed a total of €423 million (Authorized Capital I). Stockholders must normally be granted subscription rights. However, subject to the approval of the Supervisory Board, the Board of Management is authorized to exclude subscription rights for the stockholders with respect to any excess shares remaining after rights have been allocated (fractional amounts) and also to the extent necessary to grant subscription rights for new shares to holders of bonds with optional or mandatory warrants or conversion rights issued by Bayer AG or its Group companies who would be entitled to subscription rights upon the exercise of such optional or mandatory warrants or conversion rights. In addition, the Board of Management is authorized to exclude stockholders' subscription rights, subject to the approval of the Supervisory Board, in cases where an increase in capital against contributions in kind is carried out for the purpose of acquiring companies, parts of companies, participating interests in companies or other assets. The amount of capital stock represented by shares issued in the above cases against cash contributions and/or contributions in kind without granting subscription rights to the stockholders must not exceed a total of 20% of the capital stock that existed on the date the authorized capital was approved by the Annual Stockholders' Meeting.

Further authorized capital was approved by the Annual Stockholders' Meeting on April 30, 2010. The Board of Management is authorized until April 29, 2015 to increase the capital stock, subject to the approval of the Supervisory Board, by a total amount of up to €212 million by issuing new no-par registered shares against cash contributions (Authorized Capital II). Under the resolution adopted by the Annual Stockholders' Meeting, stockholders must normally be granted subscription rights. However, the Board of Management is authorized to exclude subscription rights for stockholders with respect to one or more capital increases out of the Authorized Capital II, subject to the approval of the Supervisory Board, provided that such capital increase or the total of such capital increases does not exceed 10% of the capital stock existing at the time this authorization becomes effective or the time it is exercised, for purposes of issuing new shares against cash contributions at a price that is not significantly below the market price of the company's shares of the same category that are already listed on the stock exchange on the date the issue price is finally determined. Any treasury shares acquired on the basis of an authorization of the Stockholders' Meeting and sold pursuant to Section 71 Paragraph 1 No. 8 Sentence 5 of the German Stock Corporation Act in conjunction with Section 186 Paragraph 3 Sentence 4 of the German Stock Corporation Act during the term of this authorization shall count toward the above 10% limit. Shares issued or to be issued to service bonds with optional or mandatory warrants or conversion rights shall also count toward this limit where such bonds were issued during the term of this authorization and stockholders' subscription rights were excluded by application of Section 186 Paragraph 3 Sentence 4 of the German Stock Corporation Act.

Neither of these authorized capital amounts has been utilized so far.

CONDITIONAL CAPITAL

The Annual Stockholders' Meeting on April 30, 2010 approved the creation of Conditional Capital 2010, authorizing a conditional increase of up to €212 million in the capital stock through the issuance of up to 82,694,750 shares. This conditional capital increase may be used to grant registered shares to the holders of warrant bonds, convertible bonds, jouissance rights (Genussrechte) or profit participation bonds (or combinations of these instruments) with optional or mandatory warrants or conversion rights, issued by Bayer AG or a Group company in which Bayer AG holds a direct or indirect interest of at least 90% on or before April 29, 2015 in accordance with authorizations granted by the Annual Stockholders' Meeting of April 30, 2010. The authorization to issue such instruments is limited to a total nominal amount of €6 billion. In principle, stockholders have a statutory right to be granted subscription rights to such instruments. However, the Board of Management is authorized to exclude subscription rights, subject to the approval of the Supervisory Board, if the instruments are issued at a price that is not significantly below the market price. The limit of 10% of the capital stock for the exclusion of stockholders' subscription rights in analogous application of Section 186 Paragraph 3 Sentence 4 of the German Stock Corporation Act may not be exceeded. Both shares and other such instruments shall count toward this limit if they were issued without granting subscription rights to the stockholders in direct or analogous application of Section 186 Paragraph 3 Sentence 4 of the German Stock Corporation Act.

Absent a further resolution of the Annual Stockholders' Meeting on the exclusion of stockholders' subscription rights, the Board of Management will only use the existing authorizations to increase the capital stock out of the Authorized Capital or the Conditional Capital – without granting subscription rights to the stockholders – up to a total amount of 20% of the capital stock that existed when the respective resolutions were adopted by the Annual Stockholders' Meeting on April 30, 2010. This 20% limit includes all issuances or sales of shares or of bonds with optional or mandatory warrants or conversion rights that are effected without granting subscription rights to the stockholders.

RETAINED EARNINGS

The retained earnings comprise prior years' undistributed income of consolidated companies, all actuarial gains and losses related to defined benefit pension plans that are not recognized in profit or loss, and effects of the asset ceiling.

ACCUMULATED OTHER COMPREHENSIVE INCOME

Accumulated other comprehensive income comprises exchange differences, the changes in fair values of cash flow hedges and available-for-sale financial assets, and the revaluation surplus. The latter results from the acquisition in 2005 of the remaining 50% interest in an OTC joint venture with Roche in the United States that was established in 1996 and the acquisition of the remaining 50% interest in Bayer MaterialScience Oldenburg GmbH & Co. KG, Oldenburg, Germany, in 2008. An amount of €5 million (2011: €6 million) that constitutes scheduled amortization/depreciation of the respective assets and is recognized in profit or loss was transferred in 2011 from the revaluation surplus to retained earnings.

DIVIDEND

Under the German Stock Corporation Act (AktG), the dividend payment is determined by the distributable profit reported in the annual financial statements of Bayer AG, which are prepared according to the German Commercial Code. Retained earnings were diminished by payment of the dividend of €1.65 per share for 2011. The proposed dividend for the 2012 fiscal year is €1.90 per share, which would result in a total dividend payment of €1,571 million. Payment of the proposed dividend is contingent upon approval by the stockholders at the Annual Stockholders' Meeting and therefore is not recognized as a liability in the consolidated financial statements.

NON-CONTROLLING INTEREST

The changes in the non-controlling interest in Group equity during 2012 and 2011 are shown in the following table:

Components of Non-Controlling Interest in Equity [Table 4.64]

	2011	2012
	€ million	€ million
January 1	**63**	**59**
Changes in equity not recognized in net income		
Changes in fair value of securities and cash flow hedges	-	-
Changes in actuarial gains/losses on defined benefit obligations for pensions and other post-employment benefits	-	-
Exchange differences on translation of operations outside the eurozone	(5)	(4)
Deferred taxes on valuation adjustments recognized directly in equity	-	-
Other changes in equity	1	(3)
Dividend payments	(2)	(2)
Changes in equity recognized in net income	**2**	**50**
December 31	**59**	**100**

Non-controlling interests exist mainly in the equities of Bayer CropScience Limited, India; Bayer Pearl Polyurethane Systems FZCO, United Arab Emirates; Bayer Jinling Polyurethane Co. Ltd., China; Bayer East Africa Ltd., Kenya; Bayer S.A., Peru; Bayer CropScience Ltd., Bangladesh; Bayer MaterialScience Taiwan Ltd., Taiwan; and Sumika Bayer Urethane Co. Ltd., Japan.

25. Provisions for pensions and other post-employment benefits

The provisions for pensions and other post-employment benefits in Germany and other countries at the end of the reporting period were as shown in the following table:

Provisions for Pensions and Other Post-Employment Benefits [Table 4.65]

	Pension obligations		Other post-employment benefits		Total	
	Dec 31, 2011	Dec 31, 2012	Dec 31, 2011	Dec 31, 2012	Dec 31, 2011	Dec 31, 2012
	€ million	€ million	€ million	€ million	€ million	€ million
Germany	5,970	7,430	87	126	6,057	7,556
Other countries	1,254	1,338	559	479	1,813	1,817
Total	**7,224**	**8,768**	**646**	**605**	**7,870**	**9,373**

The expenses for defined benefit pension plans and other post-employment benefit obligations were comprised as follows:

Expenses for Defined Benefit Pension Plans [Table 4.66]

	Germany		Other countries		Total	
	2011	2012	2011	2012	2011	2012
	€ million	€ million	€ million	€ million	€ million	€ million
Current service cost	170	193	59	68	229	261
Past service cost	12	30	(40)	3	(28)	33
Interest cost	579	573	252	248	831	821
Expected return on plan assets	(280)	(291)	(264)	(284)	(544)	(575)
Plan curtailments	(4)	-	(1)	1	(5)	1
Plan settlements	-	-	-	(63)	-	(63)
Total	**477**	**505**	**6**	**(27)**	**483**	**478**

Expenses for Other Post-Employment Benefit Obligations [Table 4.67]

	Germany		Other countries		Total	
	2011	2012	2011	2012	2011	2012
	€ million	€ million	€ million	€ million	€ million	€ million
Current service cost	38	56	19	21	57	77
Past service cost	-	-	1	(51)	1	(51)
Interest cost	2	9	43	41	45	50
Expected return on plan assets	-	-	(24)	(25)	(24)	(25)
Plan curtailments	-	-	1	(3)	1	(3)
Plan settlements	-	-	-	1	-	1
Total	**40**	**65**	**40**	**(16)**	**80**	**49**

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The unfunded and funded defined benefit obligations developed as follows:

Status of Unfunded and Funded Defined Benefit Obligations

	Germany					Other co		
	Pension obligations		Other post-employment benefit obligations			Pension obligations		Other post-empl benefit obli
	2011	2012	2011	2012		2011	2012	2011
	€ million	€ million	€ million	€ million		€ million	€ million	€ million
Defined benefit obligation as of January 1	**11,953**	**12,873**	**67**	**87**		**4,880**	**5,459**	**799**
Acquisitions	-	-	-	-		-	1	-
Divestitures/changes in scope of consolidation	(12)	(31)	-	(4)		(11)	(4)	-
Current service cost	170	193	38	56		59	68	19
Interest cost	579	573	2	9		252	248	43
Employee contributions	33	35	-	-		5	6	-
Past service cost	12	30	-	-		(38)	5	-
Plan settlements	-	-	-	-		-	(336)	-
Net actuarial (gain) loss	741	2,985	-	-		477	596	52
Benefits paid	(599)	(609)	(20)	(22)		(260)	(278)	(37)
Plan curtailments	(4)	-	-	-		(1)	1	1
Exchange differences	-	-	-	-		96	(49)	14
Defined benefit obligation as of December 31	**12,873**	**16,049**	**87**	**126**		**5,459**	**5,717**	**891**
Fair value of plan assets as of January 1	**6,342**	**6,927**	**-**	**-**		**3,805**	**4,264**	**339**
Acquisitions	-	-	-	-		-	-	-
Divestitures/changes in scope of consolidation	(9)	(25)	-	-		(7)	-	-
Expected return on plan assets	280	291	-	-		264	284	24
Net actuarial gain (loss)	68	434	-	-		(30)	266	(9)
Plan settlements	-	-	-	-		-	(273)	-
Employer contributions	812	1,587	20	22		393	167	10
Employee contributions	33	35	-	-		5	6	-
Benefits paid	(599)	(609)	(20)	(22)		(260)	(278)	(37)
Exchange differences	-	-	-	-		94	(46)	9
Fair value of plan assets as of December 31	**6,927**	**8,640**	**-**	**-**		**4,264**	**4,390**	**336**
Funded status as of December 31	**(5,946)**	**(7,409)**	**(87)**	**(126)**		**(1,195)**	**(1,327)**	**(555)**
Unrecognized past service cost	-	-	-	-		5	8	(4)
Effects of the asset ceiling	-	-	-	-		(16)	(13)	-
Net amount recognized as of December 31	**(5,946)**	**(7,409)**	**(87)**	**(126)**		**(1,206)**	**(1,332)**	**(559)**
of which benefit plan assets in excess of obligation	24	21	-	-		48	6	-
of which provisions for pensions and other post-employment benefits	(5,970)	(7,430)	(87)	(126)		(1,254)	(1,338)	(559)

The actual returns on the assets of defined benefit plans for pensions and those for other post-employment benefits amounted to €1,275 million (2011: €582 million) and €45 million (2011: €15 million), respectively. The actual return is the balance of the expected return on plan assets and the actuarial gains or losses incurred thereon.

A total amount of minus €2,849 million (2011: minus €1,241 million) in actuarial gains/losses and effects of the asset ceiling was recognized outside profit or loss in 2012. Of this amount, minus €2,881 million (2011: minus €1,180 million) related to pension obligations and €33 million (2011: minus €61 million) to other post-employment benefit obligations. The accumulated actuarial gains/losses recognized outside profit or loss amounted to minus €9,296 million (2011: minus €6,448 million).

The following table shows the defined benefit obligations for pensions and other post-employment benefits along with the funded status of the funded obligations.

Defined Benefit Obligation and Funded Status [Table 4.69]

	2011	2012
	€ million	€ million
Defined benefit obligation for pensions	**18,332**	**21,766**
of which unfunded	5,451	849
of which funded	12,881	20,917
Defined benefit obligation for other post-employment benefits	**978**	**948**
of which unfunded	210	246
of which funded	768	702
Funded status of funded pension obligations		
Overfunding	79	41
Underfunding	1,769	7,928
Funded status of funded obligations for other post-employment benefits		
Overfunding	-	-
Underfunding	432	350

Certain benefit entitlements in Germany have been switched from unfunded pension plans, i.e. plans financed entirely through provisions, to funded plans. The fact that plan assets do not yet fully cover the obligations explains the increase in underfunding. Pension obligations in Germany amounting to €5,653 million, previously financed through provisions, must therefore now be reported as funded obligations as they are partially backed by assets of Bayer Pension Trust e.V., Leverkusen (BPT). In 2012, a contribution of €1,000 million (2011: €260 million) in short-dated securities was made to BPT. Actuarial losses due to declines in discount rates also had an effect. The partial funding of these pension plans will reduce the use of operating cash flows in the future to meet the pension obligations. In 2011, plan assets in the United States were raised by additional funding of €217 million.

PENSION PLANS AND OBLIGATIONS FOR OTHER POST-EMPLOYMENT BENEFITS

Group companies provide retirement benefits for most of their employees, either directly or by contributing to privately or publicly administered funds. The way these benefits are provided varies according to the legal, fiscal and economic conditions of each country, the benefits generally being based on employee compensation and years of service. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

The Bayer Group has set up funded pension plans for its employees in many countries. Since the legal and tax requirements and economic conditions may vary considerably between countries, assets are managed according to country-specific principles. For plan assets, stress scenarios are simulated and other risk analyses (such as value at risk) undertaken with the aid of risk management systems. Other determinants are risk diversification, portfolio efficiency and a country-specific and global balance of opportunity and risk designed primarily to ensure the payment of all future benefits.

Bayer-Pensionskasse VVaG, Leverkusen, Germany (Bayer-Pensionskasse), is by far the most significant of the pension funds. This legally independent fund is regarded as a life insurance company and is therefore subject to the German Insurance Supervision Act. The benefit obligations covered by Bayer-Pensionskasse comprise retirement, surviving dependents' and disability pensions. The pension plan is funded from employee and employer contributions. This plan was closed to new hires effective January 1, 2005.

Pension entitlements for people who joined Bayer in Germany on or after January 1, 2005 are granted via Rheinische Pensionskasse VVaG, Leverkusen. Future pension payments from this fund are based on contributions and the return on the fund's assets; a guaranteed interest rate applies.

The investment policy of Bayer-Pensionskasse is geared to compliance with regulatory provisions and to the risk structure resulting from its obligations. In light of capital market movements, Bayer-Pensionskasse has therefore developed a strategic target investment portfolio aligned to its risk structure. Its investment strategy is focused primarily on stringently managing downside risks rather than on maximizing absolute returns. It is anticipated that with this investment policy, Bayer-Pensionskasse can generate a return that enables it to meet its long-term commitments.

Another important pension provision vehicle is BPT. Since 2011, BPT has also covered the pension obligations of Bayer Pharma AG, Berlin, the respective trust assets having previously been held by Schering Altersversorgung Treuhand Verein e.V. In addition, BPT covers other retirement provision arrangements of the Bayer Group, such as deferred compensation and components of other direct commitments. Here too, the investment strategy is geared to the structure of the corresponding obligations. It permits the use of derivatives. Nearly all currency risks are fully hedged.

Under the German law on secondary liability, Bayer guarantees the pension entitlements of employees in Germany who are members of benefit plans covered by a pension provision vehicle.

Other material pension plans exist in the United States and the United Kingdom. These plans are closed to new hires. For plan assets in other countries, too, the key investment strategy criteria are the structure of the benefit obligations and the risk profile.

The other post-employment benefit obligations in Germany mainly related to early retirement programs. Those outside Germany primarily related to health care cost payments to retirees in the United States.

The weighted composition of the plan assets to cover pensions and other post-employment benefit obligations at the end of the reporting period was as follows:

Plan Assets to Cover Pension Obligations as of December 31 [Table 4.70]

	Germany		Other countries	
	2011	2012	2011	2012
	%	%	%	%
Equity securities	18	16	37	36
Debt securities	64	73	51	52
Real estate and special real estate funds	7	5	3	2
Other	11	6	9	10
Total	**100**	**100**	**100**	**100**

Plan Assets to Cover Other Post-Employment Benefit Obligations as of December 31 [Table 4.71]

	Germany		Other countries	
	2011	2012	2011	2012
	%	%	%	%
Equity securities	-	-	34	30
Debt securities	-	-	43	40
Real estate and special real estate funds	-	-	-	-
Other	-	-	23	30
Total	**-**	**-**	**100**	**100**

The fair value of the plan assets included real estate leased by Bayer, recognized at a fair value of €71 million (2011: €74 million), and Bayer shares held through investment funds, recognized at their fair value of €37 million (2011: €26 million). The other plan assets principally comprise mortgage loans granted, other receivables, fixed-term deposits, alternative investment products, and cash and cash equivalents.

MEASUREMENT PARAMETERS AND THEIR SENSITIVITIES

The following weighted parameters were used to measure the pension obligations as of December 31 and the expense for pensions and other post-employment benefits in the respective year:

Parameters for Benefit Obligations [Table 4.72]

	Germany		Other countries		Total	
	2011	2012	2011	2012	2011	2012
	%	%	%	%	%	%
Pension obligations						
Discount rate	4.50	3.20	4.60	4.05	4.50	3.45
of which U.S.A.			4.10	3.60	4.10	3.60
of which U.K.			4.70	4.40	4.70	4.40
Projected future salary increases	3.00	3.00	3.65	3.85	3.20	3.20
Projected future benefit increases	1.75	1.75	3.15	3.20	2.15	2.15
Other post-employment benefit obligations						
Discount rate	3.50	1.10	4.80	4.15	4.70	3.75

The method for calculating the pension discount rate in the eurozone was modified as of December 31, 2012. The discount rate is no longer determined against an iBoxx reference portfolio of bonds, as this was now considered to be insufficiently diversified. A new reference portfolio containing a larger number of bonds was defined on the basis of data published by Bloomberg, retaining the credit quality criteria based on published ratings. The discount rate determined using this method was 3.2%. The discount rate determined using the previous iBoxx reference portfolio would have been 3.0%, increasing pension provisions by approximately €540 million.

Parameters for Benefit Expense [Table 4.73]

	Germany		Other countries		Total	
	2011	2012	2011	2012	2011	2012
	%	%	%	%	%	%
Pension obligations						
Discount rate	4.90	4.50	5.40	4.60	5.05	4.50
Projected future salary increases	3.00	3.00	4.25	3.65	3.35	3.20
Projected future benefit increases	1.75	1.75	3.50	3.15	2.25	2.15
Expected return on plan assets	4.20	4.25	6.70	6.25	5.15	4.90
Other post-employment benefit obligations						
Discount rate	3.10	3.50	5.70	4.80	5.50	4.70
Expected return on plan assets	-	-	7.65	7.65	7.65	7.65

Altering individual parameters by 0.5 percentage points while leaving the other parameters unchanged would have impacted pension and other post-employment benefit obligations as of year end 2012 as follows:

Sensitivity of Benefit Obligations [Table 4.74]

	Germany		Other countries		Total	
	0.5 percentage point increase	0.5 percentage point decrease	0.5 percentage point increase	0.5 percentage point decrease	0.5 percentage point increase	0.5 percentage point decrease
	€ million	€ million	€ million	€ million	€ million	€ million
Pension obligations						
Change in discount rate	(1,219)	1,383	(379)	416	(1,598)	1,799
Change in projected future salary increases	112	(107)	53	(50)	165	(157)
Change in projected future benefit increases	832	(767)	106	(84)	938	(851)
Other post-employment benefit obligations						
Change in discount rate	(2)	2	(46)	50	(48)	52

Provisions are also set up for the obligations, mainly of U.S. subsidiaries, to provide post-employment benefits in the form of health care cost payments to retirees. The valuation of health care costs was based on the assumption that they will increase at a rate of 8.0% (assumption in 2011: 8.5%), which should gradually decline to 5.0% (2011: 5.0%) by 2018. The following table shows the impact on other post-employment benefit obligations and total benefit expense of a one-percentage-point change in the assumed cost increase rates:

Sensitivity to Health Care Cost Increases [Table 4.75]

	Increase of one percentage point	Decrease of one percentage point
	€ million	€ million
Impact on other post-employment benefit obligations	73	(62)
Impact on benefit expense	5	(4)

PAYMENTS MADE AND EXPECTED FUTURE PAYMENTS

The following payments correspond to the employer contributions made or expected to be made to funded and unfunded pension and other post-employment benefit plans:

Employer Contributions Paid or Expected [Table 4.76]

	Germany			Other countries		
	2011	2012	2013 expected	2011	2012	2013 expected
	€ million	€ million	€ million	€ million	€ million	€ million
Pension obligations	812	1,587	159	393	167	99
Other post-employment benefit obligations	20	22	32	10	17	34
Total	**832**	**1,609**	**191**	**403**	**184**	**133**

Pensions and other post-employment benefits payable in the future are estimated as follows:

Future Benefit Obligations [Table 4.77]

	Germany		Other countries		Total	
	Pension obligations	Other post-employment benefit obligations	Pension obligations	Other post-employment benefit obligations	Pension obligations	Other post-employment benefit obligations
	€ million	€ million	€ million	€ million	€ million	€ million
2013	609	32	283	42	892	74
2014	612	28	302	43	914	71
2015	618	22	305	45	923	67
2016	631	18	374	47	1,005	65
2017	639	11	374	47	1,013	58
2018–2022	3,348	15	2,142	264	5,490	279

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ACTUARIAL GAINS AND LOSSES OVER THE PAST FIVE YEARS

The actuarial gains and losses related to defined benefit obligations and plan assets, reflected in the statement of changes in equity and recognized in other comprehensive income, were as follows:

Changes in Accumulated Actuarial Gains and Losses Related to Defined Benefit Obligations and Plan Assets

	Pension obligations Germany					Pension obligations Other countries						Other post-employment benefit obliga Other cour				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012		2008	2009	2010	2011	
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million		€ million	€ million	€ million	€ million	€ m
Defined benefit obligation	10,319	10,937	11,953	12,873	16,049	3,752	4,173	4,880	5,459	5,717		730	750	799	891	
Fair value of plan assets	6,032	6,092	6,342	6,927	8,640	2,651	3,137	3,805	4,264	4,390		251	304	339	336	
Funded status	**(4,287)**	**(4,845)**	**(5,611)**	**(5,946)**	**(7,409)**	**(1,101)**	**(1,036)**	**(1,075)**	**(1,195)**	**(1,327)**		**(479)**	**(446)**	**(460)**	**(555)**	
Accumulated actuarial gains (losses) relating to benefit obligation as of																
January 1	**(1,197)**	**(910)**	**(1,342)**	**(2,176)**	**(2,915)**	**(403)**	**(513)**	**(822)**	**(1,157)**	**(1,633)**		**(221)**	**(195)**	**(199)**	**(151)**	
Changes due to divestitures and changes in scope of consolidation	-	-	-	2	5	-	-	-	1	-		-	-	-	-	
Newly arisen during the year due to changes in actuarial parameters	450	(396)	(892)	(708)	(2,875)	40	(368)	(311)	(484)	(533)		(10)	(8)	19	(81)	
Newly arisen during the year due to experience adjustments	(163)	(36)	58	(33)	(110)	(178)	59	(24)	7	(63)		36	4	29	29	
Allocations to discontinued operations	-	-	-	-	-	-	-	-	-	-		-	-	-	-	
Exchange differences	-	-	-	-	-	28	-	-	-	-		-	-	-	-	
December 31	**(910)**	**(1,342)**	**(2,176)**	**(2,915)**	**(5,895)**	**(513)**	**(822)**	**(1,157)**	**(1,633)**	**(2,229)**		**(195)**	**(199)**	**(151)**	**(203)**	
Accumulated actuarial gains (losses) relating to plan assets as of																
January 1	**(920)**	**(1,133)**	**(1,147)**	**(1,161)**	**(1,094)**	**7**	**(886)**	**(606)**	**(453)**	**(484)**		**(25)**	**(162)**	**(124)**	**(109)**	
Changes due to divestitures and changes in scope of consolidation	-	-	-	(1)	3	-	-	-	(1)	-		-	-	-	-	
Newly arisen during the year	(213)	(14)	(14)	68	434	(893)	280	153	(30)	266		(137)	38	15	(9)	
Allocations to discontinued operations	-	-	-	-	-	-	-	-	-	-		-	-	-	-	
Exchange differences	-	-	-	-	-	-	-	-	-	-		-	-	-	-	
December 31	**(1,133)**	**(1,147)**	**(1,161)**	**(1,094)**	**(657)**	**(886)**	**(606)**	**(453)**	**(484)**	**(218)**		**(162)**	**(124)**	**(109)**	**(118)**	
Accumulated actuarial gains (losses) relating to benefit obligation and plan assets as of December 31	**(2,043)**	**(2,489)**	**(3,337)**	**(4,009)**	**(6,552)**	**(1,399)**	**(1,428)**	**(1,610)**	**(2,117)**	**(2,447)**		**(357)**	**(323)**	**(260)**	**(321)**	

In Germany, no unrealized gains/losses exist in relation to other post-employment benefit obligations.

26. Other provisions

Changes in the various provision categories in 2012 were as follows:

Changes in Other Provisions [Table 4.79]

	Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
December 31, 2011	**1,002**	**287**	**430**	**1,217**	**687**	**1,946**	**298**	**5,867**
Changes in scope of consolidation	-	-	(7)	1	-	(1)	29	22
Additions	515	56	131	1,230	1,488	1,535	196	5,151
Utilization	(586)	(51)	(214)	(1,040)	(452)	(1,298)	(181)	(3,822)
Reversal	(50)	(11)	(28)	(86)	(25)	(66)	(65)	(331)
Interest cost	-	5	1	-	-	48	-	54
Exchange differences	(20)	(3)	(6)	(8)	(34)	(34)	(6)	(111)
December 31, 2012	**861**	**283**	**307**	**1,314**	**1,664**	**2,130**	**271**	**6,830**

The provisions recognized in the statement of financial position as of December 31, 2012 were expected to be utilized as follows:

Expected Utilization of Other Provisions [Table 4.80]

	Taxes	Environmental protection	Restructuring	Trade-related commitments	Litigations	Personnel commitments	Miscellaneous	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
2013	351	48	200	1,202	1,386	1,465	191	4,843
2014	140	28	46	93	118	127	16	568
2015	1	22	16	14	87	150	1	291
2016	-	6	14	3	14	87	10	134
2017	194	5	6	2	3	42	6	258
2018 or later	175	174	25	-	56	259	47	736
Total	**861**	**283**	**307**	**1,314**	**1,664**	**2,130**	**271**	**6,830**

The provisions were partly offset by claims for refunds in the amount of €594 million (2011: €406 million), which were recognized as receivables. They related principally to claims for refunds in connection with product liability and to environmental measures.

26.1 Taxes

Provisions for taxes comprised provisions for income taxes amounting to €725 million (2011: €886 million) and provisions for other types of taxes amounting to €136 million (2011: €116 million).

Further income tax commitments according to IAS 12 (Income Taxes) existed at year end in the amount of €72 million (2011: €76 million) recognized in the statement of financial position as income tax liabilities.

26.2 Environmental protection

Provisions for environmental protection mainly related to the rehabilitation of contaminated land, recultivation of landfills, and redevelopment and water protection measures.

26.3 Restructuring

Provisions for restructuring included €237 million (2011: €315 million) for severance payments and €70 million (2011: €115 million) for other restructuring expenses, which mainly comprised other costs related to the closure of production facilities.

A restructuring program was launched in the HealthCare subgroup in November 2010 to improve its efficiency for the long term. The measures, which relate to all functional areas, are intended to produce sustained cost savings and ensure a shift in the subgroup's activities from the mature markets toward the emerging markets. Significant individual restructuring measures took place in Germany, Japan, France and the United States. They included the restructuring of the Global Chemical and Pharmaceutical Development function to better utilize the cost-intensive infrastructure and sharpen the focus on developing innovative products. Provisions for the above and other restructuring measures at HealthCare as of December 31, 2012, amounted to €136 million, comprising €129 million for severance payments and €7 million for other restructuring expenses.

During 2011 a restructuring program was launched in the CropScience subgroup to improve cost efficiency and increase flexibility. Significant individual measures took place in the United States, Germany and France. The restructuring initiated in the United States in 2011, involving the closure of several carbamate production facilities in Institute, West Virginia, and of the formulation plant in Woodbine, Georgia, continued in 2012, utilizing the provisions established for this purpose. Provisions for the above and other restructuring measures at CropScience as of December 31, 2012, amounted to €119 million, comprising €67 million for severance payments and €52 million for other restructuring expenses.

The restructuring measures carried out in the MaterialScience subgroup related mainly to the optimization of certain sites in the United States to improve cost efficiency and the realignment of the systems house business in Europe and the associated consolidation of production facilities. Provisions for restructuring at MaterialScience as of December 31, 2012, amounted to €25 million, comprising €16 million for severance payments and €9 million for other restructuring expenses.

Significant individual restructuring measures in the Business Services area related to the transfer, begun in 2011, of parts of the IT infrastructure services in Germany to another provider. Provisions for restructuring in the Business Services area as of December 31, 2012, amounted to €10 million, comprising €8 million for severance payments and €2 million for other restructuring expenses.

In addition, restructuring measures focusing on the introduction of country platforms, along with further efficiency improvements, were carried out throughout the Group so as to more effectively pool central functions. The restructuring provisions associated with these measures as of December 31, 2012, amounted to €17 million, including severance payments.

26.4 Trade-related commitments

Provisions for trade-related commitments comprised provisions for rebates, discounts and other price adjustments, product returns, outstanding invoices, pending losses and onerous contracts.

26.5 Litigations

The legal risks currently considered to be material, and their development, are described in Note [32].

SEE NOTE [32]

26.6 Personnel commitments

Provisions for personnel commitments mainly include those for variable and individual one-time payments, credit balances on long-term accounts, service awards, early retirements, pre-retirement part-time working arrangements and other personnel costs. Also reflected here are the obligations under the stock-based compensation programs. Provisions for severance payments resulting from restructuring are reflected in provisions for restructuring.

STOCK-BASED COMPENSATION PROGRAMS

The Bayer Group offers stock-based compensation programs collectively to different groups of employees. As required by IFRS 2 (Share-based Payment) for compensation systems involving cash settlement, awards to be made under the stock-based programs are covered by provisions in the amount of the fair value of the obligations existing as of the date of the financial statements vis-à-vis the respective employee group. All resulting valuation adjustments are recognized in profit or loss.

The following table shows the changes in provisions for the various programs:

Changes in Provisions for Stock-Based Compensation Programs [Table 4.81]

	Stock Incentive Program	Stock Participation Program	Aspire I Three-Year Program	Aspire II Three-Year Program	Aspire I Four-Year Program	Aspire II Four-Year Program	Total
	€ million	€ million	€ million	€ million	€ million	€ million	€ million
December 31, 2011	**1**	**6**	**38**	**48**	**10**	**11**	**114**
Additions	-	3	18	23	45	74	163
Utilization	(1)	(3)	(33)	(43)	(1)	(2)	(83)
Reversal	-	-	(3)	(1)	-	-	(4)
Exchange differences	-	-	-	(1)	-	(1)	(2)
December 31, 2012	**0**	**6**	**20**	**26**	**54**	**82**	**188**

The value of the Aspire tranches that were fully earned at the end of 2012, resulting in payments at the beginning of 2013, was €46 million (2011: €75 million).

Total expense for all stock-based compensation programs in 2012 was €163 million (2011: €55 million).

The fair value of obligations under the standard stock-based compensation programs has been calculated using the Monte Carlo simulation method based on the following key parameters:

Parameters for Monte Carlo Simulation [Table 4.82]

	2011	2012
Dividend yield	3.38%	2.66%
Risk-free interest rate for the three-year program	0.315%	0.004%
Risk-free interest rate for the four-year program	0.564%	0.155%
Volatility of Bayer stock	29.77%	27.40%
Volatility of the EURO STOXX 50	26.85%	24.54%
Correlation between Bayer stock price and the EURO STOXX 50	0.68	0.75

LONG-TERM INCENTIVE PROGRAM FOR MEMBERS OF THE BOARD OF MANAGEMENT AND OTHER SENIOR EXECUTIVES (ASPIRE I)

Since 2005, members of the Board of Management and other senior executives have been entitled to participate in Aspire I on the condition that they purchase a certain number of Bayer shares – determined for each individual according to specific guidelines – and retain them for the full term of the program. A percentage of the executive's annual base salary – based on his/her position – is defined as a target for variable payments (Aspire target opportunity). Depending on the performance of Bayer stock, both in absolute terms and relative to the EURO STOXX 50 benchmark index during a three-year performance period (or, starting with the regular 2010 tranche, a four-year performance period), participants are granted an award of up to 300% of their individual Aspire target opportunity for four-year tranches, or 200% for three-year tranches, at the end of the program. In 2010 a final tranche with a three-year performance period was issued in addition. This tranche expired at the end of 2012, and payment of the maximum resulting amount (200%) was made at the beginning of 2013.

LONG-TERM INCENTIVE PROGRAM FOR MIDDLE MANAGEMENT (ASPIRE II)

Also since 2005, other senior managers and middle managers have been offered Aspire II, a variant of Aspire I that does not require a personal investment in Bayer shares and that was extended to further managerial employees in 2012. In this case, the amount of the award is based entirely on the absolute performance of Bayer stock. The maximum award is 250% of each manager's Aspire target opportunity for four-year tranches, or 150% for three-year tranches. The final three-year tranche expired at the end of 2012, and payment of the maximum resulting amount (150%) was made at the beginning of 2013.

BAYSHARE 2012

All management levels and non-managerial employees are offered an annual stock participation program known as "BayShare," under which Bayer subsidizes their personal investments in the company's stock. The discount under this program is set separately each year. In 2012 it was 20% (2011: 20%) of the subscription amount. Employees stated a fixed amount that they wished to invest in shares. The maximum subscription amount in Germany was set at €2,500 (2011: €2,500) or €5,000 (2011: €5,000), depending on the employee's position. The shares thus acquired must be retained until December 31 of the year following the year of purchase, irrespective of continued employment with the Bayer Group.

In 2012 employees purchased a total of about 304,500 shares (2011: 501,000 shares) under the BayShare program, as a result of which Bayer incurred expenses of €4 million (2011: €5 million).

STOCK-BASED COMPENSATION PROGRAMS 2002–2004

The stock-based compensation programs offered to the different employee groups in 2002 through 2004 all had similar basic structures. Changes in the obligations under these programs are reflected in the financial statements at fair value through profit or loss. Entitlements to awards under these programs are conditioned on retention of the Bayer shares for a certain time period. The tranches issued in 2002 expired in 2012.

The following table shows the programs issued through 2004 and still ongoing, for which provisions of €6 million were established as of December 31, 2012:

Stock-Based Compensation Programs 2003–2004 [Table 4.83]

	Stock Incentive Program	Stock Participation Program
Year of issue	2003–2004	2003–2004
Original term in years	10	10
Retention period/distribution date in years from issue date	2/6/10	2/6/10
Performance criteria	yes	no

STOCK INCENTIVE PROGRAM

A Stock Incentive Program was offered to middle management until 2004. Participants receive a cash payment equivalent to a defined number of Bayer shares on certain dates during the ten-year duration of the program. For every ten shares held in a special account (personal investment), they receive two shares after two years, and a further four shares after six and ten years, respectively. To qualify for these payments, they must still hold the personal investment on the incentive payment dates and the percentage rise in the price of Bayer stock by the payment date must be above the performance of the EURO STOXX 50 since the start of the program. Participants may sell their shares during the term of the program. However, the shares sold do not qualify for incentive payments on subsequent distribution dates. The number of shares that each employee could transfer to the program was equivalent to half of his or her performance-related bonus for the preceding fiscal year.

STOCK PARTICIPATION PROGRAM

The structure of this program, which was offered to the other employee groups until 2004, is similar to the Stock Incentive Program. However, the incentive payments are based exclusively on the period for which employees hold their personal investment in Bayer shares. Incentive payments are half those allocated under the Stock Incentive Program. For every ten shares held, participants receive the equivalent of one share after two years and the equivalent of a further two shares after six and ten years, respectively.

26.7 Miscellaneous

Miscellaneous provisions were established for guarantees, product liability, asset retirement obligations (other than those included in provisions for environmental protection), contingent liabilities related to business combinations, and miscellaneous liabilities.

27. Financial liabilities

Financial liabilities were comprised as follows:

Financial Liabilities [Table 4.84]

	Dec. 31, 2011		Dec. 31, 2012	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Bonds and notes/promissory notes	7,710	2,453	5,528	1,094
Liabilities to banks	2,657	729	2,841	876
Liabilities under finance leases	554	53	542	235
Liabilities from forward commodity contracts	17	17	5	5
Liabilities from other derivatives	513	268	303	104
Other financial liabilities	228	164	313	256
Total	**11,679**	**3,684**	**9,532**	**2,570**

A breakdown of financial liabilities by contractual maturity is given below:

Maturities of Financial Liabilities [Table 4.85]

Maturity	Dec. 31, 2011	Maturity	Dec. 31, 2012
	€ million		€ million
2012	3,684	2013	2,570
2013	1,579	2014	1,897
2014	1,788	2015	910
2015	903	2016	436
2016	398	2017	581
2017 or later	3,327	2018 or later	3,138
Total	**11,679**	**Total**	**9,532**

The Bayer Group's financial liabilities are mostly unsecured and – with the exception of the subordinated €1,300 million hybrid bond – are of equal priority.

In addition to promissory notes in the amount of €370 million (2011: €370 million), the Bayer Group has issued the following bonds and notes:

Bonds and Notes [Table 4.86]

Effective interest rate	Stated rate		Nominal volume	Dec. 31, 2011	Dec. 31, 2012
				€ million	€ million
		Bayer AG			
6.075%	6.000%	EMTN bond 2002/2012	EUR 2,000 million	2,005	-
5.155%	5.000%	Hybrid bond 2005/2105 (2015)	EUR 1,300 million	1,344	1,364
4.621%	4.500%	EMTN bond 2006/2013	EUR 1,000 million	1,001	1,006
5.774%	5.625%	EMTN bond 2006/2018	GBP 250 million	297	304
5.541%	5.625%	EMTN bond 2006/2018 (increase)	GBP 100 million	120	123
		Bayer Capital Corporation B.V.			
4.750%	4.625%	EMTN bond 2009/2014	EUR 1,300 million	1,292	1,314
		Bayer Corporation			
7.180%	7.125%	Notes 1995/2015	US$ 200 million	170	159
6.670%	6.650%	Notes 1998/2028	US$ 350 million	314	316
		Bayer Holding Ltd.			
2.006%	1.955%	EMTN bond 2007/2012	JPY 15 billion	149	-
Floating	Floating	EMTN bond 2007/2012	JPY 30 billion	299	-
Floating*	Floating*	EMTN bond 2008/2013	JPY 10 billion	100	88
3.654%	3.575%	EMTN bond 2008/2018	JPY 15 billion	149	132
1.493%	1.459%	EMTN bond 2010/2017	JPY 10 billion	100	88
0.858%	0.816%	EMTN bond 2012/2017	JPY 30 billion	-	264
		Total		**7,340**	**5,158**

* Floating-rate coupon comprising three-month-JPY-LIBOR plus 56 basis points

MULTI-CURRENCY EUROPEAN MEDIUM TERM NOTES PROGRAM

An important means of external financing are the bonds issued under the multi-currency European Medium Term Notes (EMTN) program. The following transactions took place in 2012 and 2011:

The EMTN bonds, each with a nominal volume of €200 million, issued by Bayer AG in December 2008 and April 2007 were redeemed at their respective maturities in January 2011 and April 2011.

In April 2012, the EMTN bond with a nominal volume of €2,000 million issued by Bayer AG in April 2002 was redeemed at maturity. In June 2012, the EMTN bonds with nominal volumes of JPY 15 billion and JPY 30 billion issued by Bayer Holding Ltd. in June 2007 were redeemed at maturity, and an EMTN bond with a nominal volume of JPY 30 billion was issued in April 2012.

SUBORDINATED BONDS

In July 2005, Bayer AG issued a 100-year subordinated hybrid bond with a nominal volume of €1,300 million. This issue matures in 2105 and has a fixed coupon of 5.0% in the first 10 years. Thereafter, interest is calculated quarterly at a floating rate (three-month EURIBOR plus 280 basis points). After the first 10 years, Bayer AG has a quarterly option to redeem the bonds at face value. The coupon is payable in arrears. This bond is treated as 75% equity by Moody's and as 50% equity by Standard & Poor's and therefore improves the Bayer Group's rating-specific debt indicators.

Bayer AG guarantees all the bonds issued by subsidiaries.

LEASING LIABILITIES

Lease payments totaling €622 million (2011: €657 million), including €80 million (2011: €103 million) in interest, are to be made under finance leases to the respective lessors in future years.

The liabilities under finance leases mature as follows:

Leasing Liabilities [Table 4.87]

	Dec. 31, 2011				Dec. 31, 2012		
Maturity	Lease payments	Interest component	Liabilities under finance leases	Maturity	Lease payments	Interest component	Liabilities under finance leases
	€ million	€ million	€ million		€ million	€ million	€ million
2012	77	24	53	2013	254	19	235
2013	245	19	226	2014	53	12	41
2014	42	11	31	2015	45	11	34
2015	36	11	25	2016	42	10	32
2016	35	10	25	2017	31	8	23
2017 or later	222	28	194	2018 or later	197	20	177
Total	**657**	**103**	**554**	**Total**	**622**	**80**	**542**

OTHER INFORMATION

As of December 31, 2012, the Group had credit facilities at its disposal totaling €6.3 billion (2011: €6.3 billion), of which €2.8 billion (2011: €2.7 billion) was used and €3.5 billion (2011: €3.6 billion) was unused and thus available for borrowing on an unsecured basis.

SEE NOTE [30]

Further information on the accounting for liabilities from derivatives is given in Note [30].

28. Trade accounts payable

Trade accounts payable comprised €4,267 million (2011: €3,730 million) due within one year and €28 million (2011: €49 million) due after one year.

29. Other liabilities

Other liabilities comprised:

Other Liabilities [Table 4.88]

	Dec. 31, 2011		Dec. 31, 2012	
	Total	Of which current	Total	Of which current
	€ million	€ million	€ million	€ million
Accrued interest on liabilities	227	218	142	131
Liabilities to employees	175	153	176	146
Liabilities for social expenses	161	141	168	152
Other tax liabilities	358	303	395	353
Liabilities to non-controlling interest	61	-	-	-
Deferred income	389	136	346	130
Miscellaneous liabilities	733	679	500	406
Total	**2,104**	**1,630**	**1,727**	**1,318**

As in the previous year, liabilities to non-controlling interest pertained to a pro-rated claim on the total assets of Currenta GmbH & Co. OHG which could arise if the other stockholder exercises a statutory right of termination.

The deferred income included €65 million (2011: €72 million) in grants and subsidies received from governments, of which €14 million (2011: €14 million) was reversed and recognized in profit or loss.

The miscellaneous liabilities included €54 million (2011: €172 million) from derivative hedging transactions.

30. Financial instruments

The system used by the Bayer Group to manage credit risk, liquidity risk and the various types of market risks (interest-rate risk, currency risk and other price risks), together with its objectives, methods and procedures, is outlined in the Risk Report, which forms part of the Combined Management Report.

30.1 Information on financial instruments by category

The following table shows the carrying amounts and fair values of financial assets and liabilities by category of financial instrument and a reconciliation to the corresponding line item in the statements of financial position. Since the line items "Other receivables," "Trade accounts payable" and "Other liabilities" contain both financial instruments and non-financial assets or liabilities (such as other tax receivables or advance payments for services to be received in the future), the reconciliation is shown in the column headed "Non-financial assets/liabilities."

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Carrying Amounts and Fair Values of Financial Instruments

	Dec. 31, 2011										
	Carried at amortized cost		Carried at fair value			Non-financial assets/ liabilities	Carrying amount in the statement of financial position		Carried at amortized cost		
	Carrying amount Dec. 31, 2011	Fair value (for information)	Based on quoted prices in active markets	Based on market-derived data	Based on individual valuation parameters				Carrying amount Dec. 31, 2012	Fair value (for information)	Based on quoted prices in active markets
			Carrying amount	Carrying amount	Carrying amount	Carrying amount					Carrying amount
	€ million	€ million	€ million	€ million	€ million	€ million	€ million		€ million	€ million	€ million
Trade accounts receivable	7,061						7,061		7,431		
Loans and receivables	7,061	7,053					7,061		7,431	7,429	
Other financial assets	2,920		716	477	35		4,148		1,008		520
Loans and receivables	2,770	2,781					2,770		874	874	
Available-for-sale financial assets	41		716				757		32		324
Held-to-maturity financial assets	109	114					109		102	105	
Non-derivative held-for-trading financial assets											196
Derivatives that qualify for hedge accounting				220			220				
Derivatives that do not qualify for hedge accounting				257	35		292				
Other receivables	713					1,340	2,053		633		
Loans and receivables	713	712					713		633	634	
Non-financial assets						1,340	1,340				
Cash and cash equivalents	1,770						1,770		1,695		
Loans and receivables	1,770	1,770					1,770		1,695	1,695	
Total financial assets	**12,464**		**716**	**477**	**35**		**13,692**		**10,767**		**520**
of which loans and receivables	12,314						12,314		10,633		
Financial liabilities	11,149			530			11,679		9,224		
Carried at amortized cost	11,149	11,861					11,149		9,224	9,670	
Derivatives that qualify for hedge accounting				211			211				
Derivatives that do not qualify for hedge accounting				319			319				
Trade accounts payable	3,466					313	3,779		3,928		
Carried at amortized cost	3,466	3,466					3,466		3,928	3,928	

Loans and receivables and liabilities carried at amortized cost also include receivables and liabilities under finance leases where Bayer is the lessor or lessee and which therefore have to be measured in accordance with IAS 17.

The fair value stated for receivables, loans, held-to-maturity financial investments and non-derivative financial liabilities is the present value of the respective future cash flows. This was determined by discounting the cash flows at a closing-date interest rate that takes into account the term of the assets or liabilities and the creditworthiness of the counterparty. Where a market price was available, however, this was deemed to be the fair value.

Because of the short maturities of most trade accounts receivable and payable, other receivables and liabilities, and cash and cash equivalents, their carrying amounts at the closing date did not significantly differ from the fair values.

Income, expense, gains and losses on financial instruments can be assigned to the following categories:

Income, Expense, Gains and Losses on Financial Instruments [Table 4.90]

	2012					
	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
	€ million	€ million	€ million	€ million	€ million	€ million
Interest income	172	2	4	174	129	481
Interest expense	-	-	-	(156)	(558)	(714)
Income/expenses from affiliated companies	-	-	(1)	-	-	(1)
Changes in fair value	-	-	-	21	-	21
Impairment losses	(96)	-	(6)	-	-	(102)
Impairment loss reversals	28	-	2	-	-	30
Exchange gains/losses	(129)	-	(1)	104	6	(20)
Gains/losses from retirements	-	-	1	-	-	1
Other financial income/expenses	(4)	-	-	-	(30)	(34)
Net result	**(29)**	**2**	**(1)**	**143**	**(453)**	**(338)**

Income, Expense, Gains and Losses on Financial Instruments (Previous Year) [Table 4.91]

	2011					
	Loans and receivables	Held-to-maturity financial investments	Available-for-sale financial assets	Held for trading	Liabilities carried at amortized cost	Total
	€ million	€ million	€ million	€ million	€ million	€ million
Interest income	75	3	4	175	198	455
Interest expense	-	-	-	(172)	(682)	(854)
Income/expenses from affiliated companies	-	-	2	-	-	2
Changes in fair value	-	-	-	42	-	42
Impairment losses	(62)	-	(12)	-	-	(74)
Impairment loss reversals	42	-	-	-	-	42
Exchange gains/losses	97	-	-	(25)	(158)	(86)
Gains/losses from retirements	-	-	10	-	-	10
Other financial income/expenses	(1)	-	(1)	-	(3)	(5)
Net result	**151**	**3**	**3**	**20**	**(645)**	**(468)**

The interest expense of €558 million (2011: €682 million) from non-derivative financial liabilities also included the income and expense from interest-rate swaps that qualified for hedge accounting. Interest income from financial assets not measured at fair value through profit or loss amounted to €178 million (2011: €82 million). Interest income also resulted from interest-rate derivatives in the amount of €129 million (2011: €198 million) that qualified for hedge accounting. The changes in fair values of financial assets held for trading related mainly to forward commodity contracts.

The changes in the net amount of financial assets and liabilities recognized at fair value based on individual measurement parameters were as follows:

Changes in the Net Amount of Financial Assets and Liabilities Recognized at Fair Value Based on Individual Measurement Parameters [Table 4.92]

	2011	2012
	€ million	€ million
Carrying amounts, January 1	**19**	**30**
Changes recognized in profit or loss	14	(16)
of which changes related to assets/liabilities still recognized in the statements of financial position	6	(16)
Changes recognized outside profit or loss	-	-
Additions	-	8
Retirements	(3)	-
Reclassifications	-	-
Carrying amounts, December 31	**30**	**22**

Divestment gains of €0 million (2011: €1 million) were incurred in addition. The changes recognized in profit or loss were included in other operating income or expenses.

30.2 Maturity analysis

The liquidity risk to which the Bayer Group was exposed from its financial instruments at the end of the reporting period comprised obligations for future interest and repayment installments on financial liabilities and the liquidity risk arising from derivatives, as shown in the table in Note [30.3].

SEE NOTE [30.3]

There was also a liquidity risk from an as yet unpaid €1,005 million (2011: €205 million) portion of the effective initial fund of Bayer-Pensionskasse VVaG, which may result in further payments by Bayer AG in

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Maturity Analysis of Financial Instruments

	Dec. 31, 2012	Cash flows January–March 2013		Cash flows April–December 2013			Cash flows 2014		C	
	Carrying amount	Interest	Repayment	Interest	Repayment		Interest	Repayment	Interest	R
	€ million	€ million	€ million	€ million	€ million		€ million	€ million	€ million	
Financial liabilities										
Bonds and notes/promissory notes*	5,528	6	-	135	1,088		202	1,543	132	
Liabilities to banks	2,841	19	499	69	370		74	173	66	
Remaining liabilities	855	9	208	12	283		13	74	11	
Trade accounts payable	3,928	-	3,785	-	116		-	13	-	
Other liabilities										
Accrued interest on liabilities	142	59	-	73	-		1	-	1	
Remaining liabilities	558	3	447	3	67		2	6	-	
Liabilities from derivatives										
Derivatives that qualify for hedge accounting	179	-	10	-	13		14	41	-	
Derivatives that do not qualify for hedge accounting	183	-	74	23	36		21	-	29	
Receivables from derivatives										
Derivatives that qualify for hedge accounting	346	(1)	18	78	86		57	31	52	
Derivatives that do not qualify for hedge accounting	301	-	64	19	144		17	17	19	
Loan commitments	-	-	-	-	1,005		-	-	-	
Financial guarantees	-	-	16	-	2		-	-	-	

	Dec. 31, 2011	Cash flows January–March 2012		Cash flows April–December 2012			Cash flows 2013		C	
	Carrying amount	Interest	Repayment	Interest	Repayment		Interest	Repayment	Interest	R
	€ million	€ million	€ million	€ million	€ million		€ million	€ million	€ million	
Financial liabilities										
Bonds and notes/promissory notes*	7,710	6	-	170	2,449		249	1,100	201	
Liabilities to banks	2,657	18	444	68	285		69	194	63	
Remaining liabilities	782	10	180	16	37		19	227	12	
Trade accounts payable	3,466	-	3,301	-	115		-	32	-	

30.3 Information on derivatives

Asset and liability fair values and future cash flows are exposed to currency, interest-rate and commodity price risks. Derivatives are used to reduce this risk. In some cases they are designated as hedging instruments in a hedge accounting relationship.

CURRENCY RISK

Foreign currency receivables and liabilities are hedged using foreign exchange derivatives without the existence of a hedge accounting relationship. A bond of Bayer AG denominated in British pounds was swapped on the issuance date into a fixed-rate euro EMTN bond by means of a cross-currency interest-rate swap, which was designated as a cash flow hedge. Certain forward exchange contracts and cross-currency interest-rate swaps used to hedge intra-Group loans are also designated as cash flow hedges.

Fluctuations in future cash flows resulting from forecasted foreign currency transactions are avoided partly through derivative contracts, most of which are designated as cash flow hedges.

INTEREST-RATE RISK

The interest-rate risk from fixed-interest borrowings is managed in part using interest-rate swaps. The principal borrowings concerned are the US$200 million bond issued in 1995, the US$350 million bond issued in 1998, the €1.3 billion bond issued in 2005, the €1 billion bond issued in 2006 and the €1.3 billion bond issued in 2009. Hedge accounting is applied to the respective borrowings and hedging instruments (fair-value hedge).

Gains of €30 million (2011: €54 million) were recorded on fair-value hedging instruments in 2012. Losses of €27 million (2011: €54 million) were recorded on the underlying hedged items.

COMMODITY PRICE RISK

Hedging contracts are also used to partly reduce exposure to fluctuations in future cash flows resulting from price changes on procurement markets.

FURTHER INFORMATION ON CASH FLOW HEDGES

In 2012, accumulated other comprehensive income increased by €28 million (2011: decreased by €41 million) after taxes due to changes in the fair values of derivatives designated as cash flow hedges. Expense of €148 million (2011: income of €3 million), representing fair-value changes of derivatives designated as cash flow hedges, which originally had been recognized in accumulated other comprehensive income, was reclassified to profit or loss. Similarly, pro-rated deferred tax income of €43 million (2011: deferred tax expense of €1 million) previously recognized in accumulated other comprehensive income was reclassified to profit or loss.

No material ineffective portions of hedges required recognition in profit or loss in 2012 or 2011.

The income and expense from cash flow hedges recognized in other comprehensive income mainly comprised gains of €89 million (2011: losses of €120 million) from the hedging of forecasted transactions in foreign currencies. Of these gains, €71 million (2011: losses of €113 million) will be reclassifiable to profit or loss within one year and €18 million (2011: losses of €7 million) in subsequent years.

The fair values of existing contracts in the major categories at the end of the reporting period were as follows:

Fair Values of Derivatives [Table 4.94]

	Dec. 31, 2011			Dec. 31, 2012		
		Fair value			Fair value	
	Notional amount*	Positive fair value	Negative fair value	Notional amount*	Positive fair value	Negative fair value
	€ million	€ million	€ million	€ million	€ million	€ million
Currency hedging of recorded transactions	**10,375**	**89**	**(422)**	**10,477**	**180**	**(227)**
Forward exchange contracts	8,327	88	(205)	8,705	180	(65)
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	360	3	-	330	14	-
Cross-currency interest-rate swaps	2,048	1	(217)	1,772	-	(162)
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	1,746	-	(211)	1,461	-	(159)
Currency hedging of forecasted transactions	**4,494**	**31**	**(157)**	**4,554**	**127**	**(24)**
Forward exchange contracts	3,750	25	(146)	3,418	108	(19)
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	3,721	17	(140)	3,314	107	(18)
Currency options	744	6	(11)	1,136	19	(5)
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	-	-	-	355	13	(2)
Interest-rate hedging of recorded transactions	**8,564**	**306**	**(92)**	**5,066**	**267**	**(67)**
Interest-rate swaps	8,564	306	(92)	5,066	267	(67)
of which fair value hedges	3,834	200	-	3,960	212	-
of which cash flow hedges	-	-	-	-	-	-
Interest-rate options	-	-	-	-	-	-
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	-	-	-	-	-	-
Commodity price hedging	**153**	**20**	**(17)**	**47**	**11**	**(5)**
Forward commodity contracts	153	20	(17)	30	11	(5)
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	-	-	-	-	-	-
Commodity option contracts	-	-	-	17	-	-
of which fair value hedges	-	-	-	-	-	-
of which cash flow hedges	-	-	-	-	-	-
Total	**23,586**	**446**	**(688)**	**20,144**	**585**	**(323)**
of which current derivatives	15,484	228	(417)	13,776	381	(118)
for currency hedging	11,841	89	(355)	12,713	275	(90)
for interest-rate hedging**	3,490	119	(45)	1,016	95	(23)
for commodity hedging	153	20	(17)	47	11	(5)

* The notional amount is reported as gross volume, which also contains economically closed hedges.

** The fair value of long-term interest-rate swaps resulting from current interest payments was classified as current.

31. Contingent liabilities and other financial commitments

CONTINGENT LIABILITIES

The following warranty contracts, guarantees and other contingent liabilities existed at the end of the reporting period:

Contingent Liabilities [Table 4.95]

	Dec. 31, 2011	Dec. 31, 2012
	€ million	€ million
Warranties	49	107
Miscellaneous	263	326
Total	**312**	**433**

OTHER FINANCIAL COMMITMENTS

The other financial commitments comprised operating lease agreements, orders already placed under purchase agreements related to planned or ongoing capital expenditure projects, unpaid capital provided to Bayer-Pensionskasse VVaG for its effective initial fund, a guarantee given to the trust fund of the U.K. pension plans, and commitments under cooperation agreements.

The non-discounted future minimum lease payments relating to operating leases totaled €604 million (2011: €656 million). The maturities of the respective payment obligations were as follows:

Operating Leases [Table 4.96]

Maturing in	Dec. 31, 2011	Maturing in	Dec. 31, 2012
	€ million		€ million
2012	201	2013	194
2013	149	2014	133
2014	111	2015	98
2015	78	2016	61
2016	52	2017	45
2017 or later	65	2018 or later	73
Total	**656**	**Total**	**604**

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects totaled €632 million (2011: €341 million).

The unpaid capital provided to Bayer-Pensionskasse VVaG for its effective initial fund amounted to €1,005 million (2011: €205 million) following an €800 million increase in April 2012.

In June 2012, Bayer AG signed a declaration vis-à-vis the trust fund of the U.K. pension plans guaranteeing the pension obligations of Bayer Public Limited Company and Bayer CropScience Ltd. Bayer AG – in addition to the two companies – thereby undertakes to make further payments into the plans upon receipt of a payment request from the trustees. The net liability for the above companies' pension plans according to IAS 19 amounted to €171 million as of December 31, 2012.

The Bayer Group has entered into cooperation agreements with third parties under which it has agreed to fund various research and development projects or has assumed other payment obligations based on the achievement of certain milestones or other specific conditions. If all of these payments have to be made, their maturity distribution as of December 31, 2012 was expected to be as set forth in the following table. The amounts shown represent the maximum payments to be made, and it is unlikely that they will all fall due. Since the achievement of the conditions for payment is highly uncertain, both the amounts and the dates of the actual payments may vary considerably from those stated in the table.

Other Commitments [Table 4.97]

Maturing in	Dec. 31, 2011	Maturing in	Dec. 31, 2012
	€ million		€ million
2012	314	2013	238
2013	101	2014	93
2014	135	2015	186
2015	135	2016	101
2016	83	2017	74
2017 or later	574	2018 or later	1,106
Total	**1,342**	**Total**	**1,798**

In addition to the above commitments, there were also revenue-based milestone payment commitments totaling €2,005 million (2011: €1,265 million), of which €1,886 million (2011: €1,156 million) were not expected to fall due until 2018 (2011: 2017) or later. These commitments are also highly uncertain.

Should the achievement of the milestones or specific conditions become sufficiently probable, a provision or other liability is recognized in the statement of financial position, and this may also lead to the recognition of an intangible asset in the same amount. The above table includes neither current revenue-based royalty payments nor future payments that are probable and therefore already reflected in the statement of financial position.

32. Legal risks

As a global company with a diverse business portfolio, the Bayer Group is exposed to numerous legal risks, particularly in the areas of product liability, competition and antitrust law, patent disputes, tax assessments and environmental matters. The outcome of any current or future proceedings cannot be predicted. It is therefore possible that legal or regulatory judgments or future settlements could give rise to expenses that are not covered, or not fully covered, by insurers' compensation payments and could significantly affect our revenues and earnings.

Legal proceedings currently considered to involve material risks are outlined below. The legal proceedings referred to do not represent an exhaustive list.

HealthCare:

PRODUCT-RELATED LITIGATION

Magnevist™: As of February 12, 2013, there were approximately 40 lawsuits pending and served upon Bayer in the United States involving the gadolinium-based contrast agent Magnevist™. Three other manufacturers of gadolinium-based contrast agents in the United States also have been named party to the same or similar lawsuits.

In the lawsuits, plaintiffs allege that patients developed nephrogenic systemic fibrosis (NSF) as a result of the use of Magnevist™ during medical imaging procedures. NSF is a rare, severe condition that can be debilitating and in some cases fatal. Plaintiffs seek compensatory and punitive damages under various theories, including strict liability and negligence and/or breach of warranty, claiming, among other things, that the product is defective and unreasonably dangerous and that Bayer knew, or should have known, of the risks associated with Magnevist™ and failed to disclose them or adequately warn its users.

All cases pending in federal courts have been consolidated in a multidistrict litigation (MDL) proceeding for common pre-trial management. As of February 12, 2013, Bayer had reached agreements, without admission of liability, with approximately 300 plaintiffs in the United States to settle their claims. Bayer will continue to consider the option of settling individual lawsuits on a case-by-case basis. However, Bayer believes it has meritorious defenses and will continue to defend itself vigorously against all claims that are not considered for settlement. Bayer has taken appropriate accounting measures.

Trasylol™ (aprotinin) is a drug approved for use in managing bleeding in patients undergoing coronary artery bypass graft surgery. As of February 12, 2013, there were approximately 25 lawsuits pending in the United States and served upon Bayer on behalf of persons alleging, in particular, personal injuries, including renal failure and death, and economic loss from the use of Trasylol™. Bayer also has been served with three class actions in Canada. Plaintiffs seek compensatory and punitive damages, claiming, among other things, that Bayer knew, or should have known, of these risks and should be held liable for having failed to disclose them or adequately warn users of Trasylol™. All cases pending in U.S. federal courts have been consolidated in a multidistrict litigation (MDL) proceeding for common pre-trial management. A qui tam complaint relating to marketing practices for Trasylol™ and Avelox™ filed by a former Bayer employee is pending in the United States District Court in New Jersey. The U.S. government has declined to intervene at the present time.

As of February 12, 2013, Bayer had reached agreements, without admission of liability, with approximately 1,100 plaintiffs in the United States to settle their claims. Bayer will continue to consider the option of settling individual lawsuits on a case-by-case basis. However, Bayer believes it has meritorious defenses and will continue to defend itself vigorously against all claims that are not considered for settlement. Bayer has taken appropriate accounting measures.

Yasmin™/YAZ™: As of February 12, 2013, the number of lawsuits pending in the United States and served upon Bayer was about 10,000. In addition, about 1,200 asserted claims were pending that have not been filed in court. The number of claimants in the pending lawsuits and claims totaled about 13,600 (excluding claims already settled). Claimants allege that they have suffered personal injuries, some of them fatal, from the use of Bayer's drospirenone-containing oral contraceptive products such as Yasmin™ and/or YAZ™ or from the use of Ocella™ and/or Gianvi™, generic versions of Yasmin™ and YAZ™, respectively, marketed by Barr Laboratories, Inc. in the United States. Claimants seek compensatory and punitive damages, claiming, in particular, that Bayer knew, or should have known, of the alleged risks and should be held liable for having failed to disclose them or adequately warn users. All cases pending in U.S. federal courts have been consolidated in a multidistrict litigation (MDL) proceeding for common pre-trial management. In Canada, 13 class actions have been served upon Bayer as of February 12, 2013.

In 2011 the MDL court stayed the first case set for trial and ordered the parties to participate in a mediation process. As of February 12, 2013, Bayer had reached agreements, without admission of liability, to settle the claims of approximately 4,800 claimants in the U.S. for a total amount of about US$1 billion. Bayer is only settling claims in the U.S. for venous clot injuries (deep vein thrombosis or pulmonary embolism) after a case-specific analysis of medical records on a rolling basis. Such injuries are alleged by about 3,200 of the pending unsettled claimants. Bayer will continue to consider the option of settling individual lawsuits in the U.S. on a case-by-case basis.

The United States Attorney for the Eastern District of New York is conducting an investigation regarding alleged off-label promotion of YAZ™ and Yasmin™. Bayer is cooperating with this investigation.

Additional lawsuits are anticipated. Bayer believes that it has meritorious defenses and will continue to defend itself vigorously against all claims that are not considered for settlement. Bayer has taken appropriate accounting measures for anticipated defense costs and for agreed and anticipated future settlements based on the information currently available and based on the number of pending and estimated future claims alleging venous clot injuries. The estimates used in accounting for the entire Yasmin™/YAZ™ complex at interim reporting dates during 2012 were revised for the annual financial statements. Further disclosures, in particular concerning the related measures adopted, are not made pursuant to IAS 37.92.

In connection with the above matters concerning Magnevist™, Trasylol™ and Yasmin™/YAZ™, Bayer is insured against product liability risks to the extent customary in the industry. However, the accounting measures taken with regard to the Yasmin™/YAZ™ claims exceed the available insurance coverage.

COMPETITION LAW PROCEEDINGS

Cipro™: Since the year 2000, multiple class action lawsuits against Bayer involving Cipro™, a medication used in the treatment of infectious diseases, have been pending in the United States. The plaintiffs sued Bayer and other defendants, alleging that a settlement to end patent litigation reached in 1997 between Bayer and Barr Laboratories, Inc. violated antitrust regulations. All actions filed in federal courts have been dismissed. The dismissals have been affirmed by two federal Courts of Appeals and the United States Supreme Court denied plaintiff's petitions for certiorari twice. The federal litigation has thus ended.

Further cases are pending before various state courts. The dismissal of a class action pending in state court which was brought by indirect purchasers from California has been affirmed by the California Court of Appeal. The California Supreme Court has accepted this case for review. The case has been stayed pending the outcome of a U.S. Supreme Court decision in another case to which Bayer is not a party. Bayer believes that it has meritorious defenses and intends to defend itself vigorously.

PATENT DISPUTES

Yasmin™: In 2005, Bayer filed suit against Barr Pharmaceuticals, Inc. and Barr Laboratories, Inc. in U.S. federal court alleging patent infringement by Barr for the intended generic version of Bayer's Yasmin™ oral contraceptive product in the United States. In 2008, the U.S. federal court invalidated Bayer's '531 patent for Yasmin™. The U.S. Court of Appeals for the Federal Circuit affirmed this decision and, in 2010, the U.S. Supreme Court rejected Bayer's petition for review.

In 2008, Bayer and Barr Laboratories, Inc. signed a supply and licensing agreement for the supply of a generic version of Yasmin™ which Barr markets solely in the United States under the Ocella™ brand. Barr pays Bayer a fixed percentage of the revenues from the product sold by Barr.

In 2008 Bayer received two and in 2010 another three notices of an Abbreviated New Drug Application with a Paragraph IV certification (an "ANDA IV") pursuant to which Watson Laboratories Inc., Sandoz Inc., Lupin Ltd., Famy Care Ltd. and Sun Pharma Global FZE each seek approval to market a generic version of Bayer's oral contraceptive Yasmin™ in the United States. Bayer has filed suit against Watson, Sandoz and Lupin in U.S. federal court alleging patent infringement for the intended generic version of Yasmin™. In reply, Watson and Sandoz have filed counterclaims alleging, among other things, the invalidity of various Bayer patents. In 2010, the U.S. federal court dismissed Bayer's infringement claims against Watson, Sandoz and Lupin. In April 2012, the U.S. Court of Appeals for the Federal Circuit affirmed these judgments. Bayer did not seek a review of the decision. The dismissal of Bayer´s infringement claims is now final. In June 2012, Watson Pharmaceuticals, Inc., Watson Laboratories Inc. and Watson Pharma, Inc. filed a complaint against Bayer in a U.S. state court in New York. Watson seeks compensatory and punitive damages claiming malicious prosecution, tortious interference and unjust enrichment by Bayer in connection with the patent infringement proceedings. The case is now pending before a U.S. federal court.

YAZ™: In 2007 and 2008 Bayer received notices from Barr Laboratories, Inc., Watson Laboratories Inc. and Sandoz Inc., and in 2010 Bayer received notices from Lupin Ltd. and Sun Pharma Global FZE, that each company has filed an ANDA IV seeking approval of a generic version of Bayer's YAZ™ oral contraceptive in the United States. Bayer further received such notices from Famy Care and Pharmaceutics International Inc. in 2011 and 2012. Bayer has filed patent infringement suits against Watson, Sandoz, Lupin, Sun Pharma Global and Famy Care in U.S. federal court claiming that certain of Bayer's patents have been infringed. Bayer may take legal action against Pharmaceutics International at a later point of time. In the proceedings against Watson, Sandoz and Lupin, the U.S. federal court ruled in March 2012 that Bayer's patents are valid and enforceable. The defendants have also infringed Bayer´s patents as was conceded by them earlier in the proceedings. Watson, Sandoz and Lupin have appealed. In the proceedings against Watson and Sandoz, the U.S. federal court further ordered in February 2013 that the effective date of approval of Watson's and Sandoz's YAZ™ ANDA IVs be postponed until patent expiration in June 2014. Watson and Sandoz requested a stay of the order and have appealed. Bayer will vigorously pursue its claims for relief.

In 2008 Bayer and Barr agreed on a licensing and supply agreement allowing Barr to market Gianvi™, a generic version of YAZ™, in the United States and Bayer has supplied Barr with the product for Gianvi™ since 2010.

Beyaz™: In January 2012, Bayer received a notice from Watson Laboratories Inc. that Watson has filed an ANDA IV seeking approval of a generic version of Bayer's Beyaz™ oral contraceptive in the United States. Bayer filed a patent infringement suit against Watson in U.S. federal court. In September 2012 the U.S. federal court dismissed the lawsuit without prejudice. The U.S. Food and Drug Administration (FDA) had determined that Watson's ANDA was not substantially complete. Consequently Watson's notice to Bayer was of no legal effect.

Yasmin™/Yasminelle™/YAZ™: In 2011 a board of appeal of the European Patent Office revoked a formulation patent ("micronization") for Yasmin™, Yasminelle™ and YAZ™. Bayer´s petition for review of the decision by the Enlarged Board of Appeal of the European Patent Office was rejected in November 2012. In 2004, Hexal Pharmaforschung GmbH filed an opposition against Bayer's patent. An opposition division of the European Patent Office rejected the opposition in 2006. The latest ruling follows an appeal by Hexal of the 2006 decision. In 2011, the European Patent Office revoked the other formulation patent ("dissolution") for Yasmin™, Yasminelle™ and YAZ™. Bayer has appealed. The appeal has suspensive effect.

Betaferon™/Betaseron™: In 2010 Bayer filed a complaint against Biogen Idec MA Inc. in U.S. federal court seeking a declaration by the court that a patent issued to Biogen in 2009 is invalid and not infringed by Bayer's production and distribution of Betaseron™, Bayer's drug product for the treatment of multiple sclerosis. Biogen is alleging patent infringement by Bayer through Bayer's production and distribution of Betaseron™ and Extavia™ and has sued Bayer accordingly. Betaseron™ is manufactured and

distributed in the United States by Bayer. Extavia™ is also a drug product for the treatment of multiple sclerosis; it is manufactured by Bayer, but distributed in the United States by Novartis Pharmaceuticals Corporation, another defendant in the lawsuit.

Finacea™: In January 2013, Bayer received a notice from Glenmark Generics Ltd. that Glenmark has filed an ANDA IV seeking approval of a generic version of Bayer's Finacea™ topical gel in the United States. Bayer is reviewing the information in Glenmark's letter.

Staxyn™: In April 2012, Bayer filed a patent infringement suit in a U.S. federal court against Watson Laboratories, Inc. In March 2012, Bayer had received notice of an ANDA IV pursuant to which Watson seeks approval to market a generic version of Bayer's erectile dysfunction treatment Staxyn™ prior to patent expiration in the United States. Staxyn™ is an orodispersible (orally disintegrating) formulation of Levitra™. Both drug products contain the same active ingredient, which is protected in the U.S. by two patents expiring in 2018.

Bayer believes it has meritorious defenses in the above patent disputes and intends to defend itself vigorously.

FURTHER LEGAL PROCEEDINGS

Wholesale prices in the U.S.: Bayer and a number of pharmaceutical companies in the United States are defendants in pending lawsuits in which plaintiffs, including states, are alleging manipulation in the reporting of wholesale prices and/or best prices for their prescription pharmaceutical products. The plaintiffs seek damages, including disgorgement of profits and punitive damages. Bayer believes it has meritorious defenses and intends to defend itself vigorously. In appropriate cases Bayer has agreed to settlements and will continue to consider this option in the future.

Bayer Pharma AG former shareholder litigation: In 2008 the squeeze-out of the former minority shareholders of Bayer Pharma AG (formerly named Bayer Schering Pharma AG), Berlin, Germany, became effective. As usual in such cases, several shareholders have initiated special court proceedings to review the adequacy of the compensation payments made by Bayer for the transfer of the shares in the squeeze-out. The adequacy of the compensation and the guaranteed dividend paid by Bayer in connection with the Bayer Pharma AG profit and loss transfer agreement made in 2006 is also being reviewed by the courts.

Kogenate™FS: A dispute with Recoly NV and its affiliate Zilip Pharma BV relates to the termination by Bayer of the KG-Lip project (longer acting Factor VIII using Recoly´s liposome technology). Bayer was seeking a declaratory judgment by an arbitration panel that it has exerted best commercial efforts to develop the product and that it is not contractually bound to pay a termination fee or to continue to develop the product. Recoly counterclaimed for damages. In a recent final ruling, the panel decided the matter fully in favor of Bayer.

Compliance investigation: Bayer voluntarily advised the United States government of an internal investigation conducted into compliance by a former operating unit of one of its U.S. subsidiaries with the United States Foreign Corrupt Practices Act. In November 2012, the U.S. Department of Justice, based upon its own investigation and the information made available by Bayer, closed its inquiry into this matter without taking further action.

Newark Bay environmental matters: In the United States, Bayer is one of numerous parties involved in a series of claims brought by federal and state environmental protection agencies. The claims arise from operations by entities which historically were conducted near Newark Bay or surrounding bodies of water or which allegedly discharged hazardous waste into these waterways or onto nearby land. Bayer and the other potentially responsible parties are being asked to remediate and contribute to the payment of past and future remediation or restoration costs and damages. These matters are at an early stage.

CropScience:

Proceedings involving genetically modified rice: As of February 12, 2013, Bayer was aware of a total of approximately 80 lawsuits, involving about 1,200 plaintiffs, pending in U.S. federal and state courts against several Bayer Group companies in connection with genetically modified rice in the United States. A large percentage of these cases will be dismissed upon completion of the settlement with rice growers, discussed below. Plaintiffs allege that they have suffered economic losses after traces of genetically modified rice were identified in samples of conventional long-grain rice grown in the U.S. In development of the genetically modified rice ("LL RICE"), field testing was conducted in the United States in cooperation with third parties from 1998 to 2001. The genetically modified rice was never commercialized. The USDA and the FDA have stated that the genetically modified rice does not present a health risk and is safe for use in food and feed and for the environment.

From 2009 to 2011 Bayer tried seven cases in front of U.S. juries. All trials resulted in compensatory damage awards against Bayer. In three state court trials in Arkansas, the juries also awarded punitive damages, including a US$125 million punitive damages verdict in favor of Riceland Foods, Inc., a large U.S. rice mill. Bayer has agreed to a settlement with Riceland Foods. Thus all of these cases have now been settled.

In 2011, without acknowledging liability, Bayer reached settlement agreements with U.S. long-grain rice growers. More than 94% of all of the eligible rice acreage will participate in the settlement. Bayer has now paid more than US$694 million to rice growers under the settlement. Additional payments will be made in the coming months once all claims have been verified until the full US$750 million agreed to under the settlement has been paid. The settlement program was open to all U.S. farmers who had been growing long-grain rice during the period 2006 through 2010.

Without acknowledging liability, Bayer also settled the claims filed by 25 primarily non-grower entities – including European rice importers, U.S. rice exporters, U.S. rice mills or rice dryers, rice seed sellers and several farmers outside of the US$750 million master settlement – at a total settlement value of about US$270 million. This amount also includes settlement of all the cases that went to trial.

16 cases remain pending in the U.S. with business entities that are not a part of the settlement program. The company is hopeful that many of these cases can also be settled. However, Bayer intends to continue to defend itself vigorously in all cases in which reasonable resolutions are not possible.

One of the remaining cases was brought by BASF to recover damages allegedly resulting from the contamination of its Clearfield 131 rice variety with LL RICE. In that case Bayer has filed a claim against BASF alleging that BASF was negligent in its handling of Clearfield 131 and that its negligence contributed to the damages allegedly suffered by rice growers, rice mills and others in this litigation. Bayer seeks reimbursement from BASF for a portion of the amount that Bayer has paid in settlements in this litigation. This case is set for trial in September 2013.

Bayer has established appropriate provisions for the settlement program as well as for legal and defense costs.

Asbestos: A further risk may arise from asbestos litigation in the United States. In many cases, the plaintiffs allege that Bayer and co-defendants employed third parties on their sites in past decades without providing them with sufficient warnings or protection against the known dangers of asbestos. Additionally, a Bayer affiliate in the United States is the legal successor to companies that sold asbestos products until 1976. Union Carbide has agreed to indemnify Bayer for this liability. Bayer believes it has meritorious defenses and intends to defend itself vigorously.

Notes to the Statements of Cash Flows

The statement of cash flows shows how cash inflows and outflows during the fiscal year affected the cash and cash equivalents (liquidity) of the Bayer Group. Cash flows are classified by operating, investing and financing activities in accordance with IAS 7 (Statement of Cash Flows). Effects of changes in the scope of consolidation are stated separately. Of the cash and cash equivalents, an amount of €131 million (2011: €26 million) had limited availability due to capital transfer restrictions. Past experience has shown such restrictions to be of short duration. The above amount included €100 million (2011: €5 million) of cash and cash equivalents in Venezuela.

The cash flows reported by consolidated companies outside the eurozone are translated at average monthly exchange rates, with the exception of cash and cash equivalents, which are translated at closing rates. The "Change in cash and cash equivalents due to exchange rate movements" is reported in a separate line item.

33. Net cash provided by (used in) operating activities

The gross cash flow for 2012 of €4,599 million (2011: €5,172 million) is the cash surplus from operating activities before any changes in working capital. The cash flows by segment are shown in Note [1].

SEE NOTE [1]

The net cash of €4,532 million (2011: €5,060 million) provided by operating activities (net cash flow) also takes into account the changes in working capital and other non-cash transactions.

An income-tax-related net cash outflow of €1,667 million (2011: €932 million) is included in the net cash flow for 2012. The changes in income tax liabilities, income tax provisions and claims for reimbursement of income taxes are shown in the line item "Changes in other working capital, other non-cash items."

The transfers of a total of €1,000 million (2011: €477 million) in bonds to pension funds were non-cash transactions and therefore did not result in an operating cash outflow. The purchase of securities held for trading, which must be reflected under operating activities according to IAS 7, diminished net cash flow by €200 million.

34. Net cash provided by (used in) investing activities

Net cash outflow for investing activities in 2012 amounted to €818 million (2011: €3,890 million).

Additions to property, plant and equipment and intangible assets in 2012 resulted in a cash outflow of €1,929 million (2011: €1,615 million). Cash inflows from sales of property, plant and equipment and other assets amounted to €227 million (2011: €275 million).

SEE NOTES [6.2], [6.3]

Cash outflows of €466 million (2011: €261 million) pertained to acquisitions, including those of U.S. biological crop protection company AgraQuest, Inc., the watermelon and melon seed business of U.S. company Abbott & Cobb, Inc. and the remaining 50% of the shares of Baulé S.A.S., France. The prior-year figure mainly comprised the disbursements for the acquisition of the animal health company Bomac in New Zealand and of Hornbeck Seed Company, Inc. and Pathway Medical Technologies, Inc. in the United States. Further details of acquisitions and divestitures are given in Notes [6.2] and [6.3], respectively.

The net cash inflow from noncurrent and current financial assets amounted to €1,068 million (2011: net cash outflow of €2,537 million).

The transfers of a total of €1,000 million (2011: €477 million) in bonds to pension funds were non-cash transactions and therefore did not result in an investing cash inflow.

35. Net cash provided by (used in) financing activities

In 2012 there was a net cash outflow of €3,782 million (2011: €2,213 million) for financing activities. Net loan repayments amounted to €1,945 million (2011: €397 million).

Cash outflows for dividend payments amounted to €1,366 million (2011: €1,242 million). Net interest payments – including payments for and receipts from interest-rate swaps – decreased to €468 million (2011: €570 million).

Other Information

36. Audit fees

The following fees for the services of PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft were recognized as expenses:

Audit Fees [Table 4.98]

	2011	2012
	€ million	€ million
Financial statements auditing	5	3
Audit-related services and other audit work	2	5
Tax consultancy	1	-
Other services	-	1
Total	**8**	**9**

The fees for the auditing of financial statements mainly comprise those for the audits of the consolidated financial statements of the Bayer Group and the financial statements of Bayer AG and its German subsidiaries. Fees for audit-related services primarily relate to audits of pro-forma financial information, the internal control system, including project audits in connection with the implementation of new IT systems, and to reviews of interim financial statements.

37. Related parties

Related parties as defined in IAS 24 (Related Party Disclosures) are those legal entities and natural persons that are able to exert influence on Bayer AG and its subsidiaries or over which Bayer AG or its subsidiaries exercise control or have a significant influence. They include, in particular, non-consolidated subsidiaries, joint ventures, associates and post-employment benefit plans, as well as the corporate officers of Bayer AG whose compensation is reported in Note [38] and in the Compensation Report, which forms part of the Combined Management Report.

SEE NOTE [38]

Transactions with non-consolidated subsidiaries, joint ventures, associates and post-employment benefit plans are carried out on an arm's-length basis.

The following table shows the volume of transactions with related parties that are included in the consolidated financial statements of the Bayer Group at amortized cost, by proportionate consolidation or using the equity method, and with post-employment benefit plans:

Related Parties [Table 4.99]

	2011				2012			
	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities	Sales of goods and services	Purchases of goods and services	Receivables	Liabilities
	€ million	€ million	€ million	€ million	€ million	€ million	€ million	€ million
Non-consolidated subsidiaries	17	21	6	29	32	13	17	41
Joint ventures	44	-	11	-	24	-	10	6
Associates	22	1,224	4	33	20	1,187	5	42
Post-employment benefit plans	-	-	745	78	-	-	821	73

Bayer AG has undertaken to provide jouissance right capital (Genussrechtskapital) in the form of an interest-bearing loan with a nominal volume of €150 million for Bayer-Pensionskasse VVaG. The entire amount remained drawn as of December 31, 2012. Loan capital was first provided to Bayer-Pensionskasse VVaG in 2008 for its effective initial fund. This capital amounted to €595 million as of December 31, 2012 (2011: €595 million). The outstanding receivables bear interest at an average rate of 4%.

No impairment losses were recognized in 2012 or 2011 on receivables from related parties.

38. Total compensation of the Board of Management and the Supervisory Board, advances and loans

The compensation of the Board of Management comprises short-term payments, stock-based payments and post-employment benefits.

The following table shows the individual components of the Board of Management's compensation according to IFRS.

Board of Management Compensation according to IFRS [Table 4.100]

	2011	2012
	€ thousand	€ thousand
Fixed salaries	3,139	3,394
Compensation in kind and other benefits	257	147
Total short-term non-performance-related compensation	**3,396**	**3,541**
Short-term performance-related cash compensation	3,379	4,247
Total short-term compensation	**6,775**	**7,788**
Stock-based compensation (virtual Bayer shares) earned in the respective year	3,445	4,299
Change in value of existing entitlements to stock-based compensation (virtual Bayer shares)	(278)	3,136
Stock-based compensation (Aspire) earned in the respective year	732	2,007
Change in value of existing entitlements to stock-based compensation (Aspire)	72	1,196
Total stock-based compensation (long-term incentive)	**3,971**	**10,638**
Current service cost for pension entitlements earned in the respective year	1,134	2,501
Total long-term compensation	**5,105**	**13,139**
Aggregate compensation (IFRS)	**11,880**	**20,927**

In addition to the above compensation, actuarial losses of €7,553 thousand (2011: €1,610 thousand) on pension obligations to the currently serving members of the Board of Management, mainly resulting from the decline in interest rates, were recognized outside profit or loss.

SEE MANAGEMENT REPORT
13.2 Compensation Report

Further details are provided in the Compensation Report, which forms part of the Combined Management Report.

An amount of €13,222 thousand (2011: €5,787 thousand) is recognized in the statement of financial position for future payments of stock-based compensation based on virtual shares to the currently active members of the Board of Management.

An amount of €3,793 thousand (2011: €1,651 thousand) is recognized in the statement of financial position for future payments of stock-based compensation based on the Aspire program to the currently active members of the Board of Management.

The present value of the defined benefit pension obligation for the currently active members of the Board of Management as of December 31, 2012, was €33,448 thousand (2011: €22,339 thousand).

Pension payments to former members of the Board of Management and their surviving dependents amounted to €12,673 thousand (2011: €13,069 thousand). The defined benefit obligation for former members of the Board of Management and their surviving dependents amounted to €149,746 thousand (2011: €134,179 thousand).

The compensation of the Supervisory Board amounted to €2,974 thousand (2011: €2,295 thousand), including €218 thousand (2011: €765 thousand) in variable components.

In addition to their compensation as members of the Supervisory Board, those employee representatives who are employees of Bayer Group companies receive compensation unrelated to their service on the Supervisory Board. The total amount of such compensation in 2012 was €670 thousand (2011: €645 thousand).

Pension obligations for employee representatives on the Supervisory Board amounted to €1,265 thousand (2011: €855 thousand).

There were no advances or loans to members of the Board of Management or the Supervisory Board outstanding as of December 31, 2012, or at any time during 2012 or 2011.

Leverkusen, February 18, 2013
Bayer Aktiengesellschaft

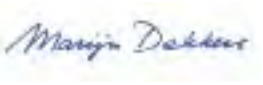
The Board of Management

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles for financial reporting, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Bayer Group, and the combined management report includes a fair review of the development and performance of the business and the position of the Bayer Group and Bayer AG, together with a description of the principal opportunities and risks associated with the expected development of the Bayer Group and Bayer AG.

Leverkusen, February 18, 2013
Bayer Aktiengesellschaft

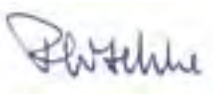
The Board of Management



Dr. Marijn Dekkers
Chairman



Werner Baumann



Prof. Dr. Wolfgang Plischke



Dr. Richard Pott

Independent Auditor's Report

To Bayer Aktiengesellschaft, Leverkusen

REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

We have audited the accompanying consolidated financial statements of Bayer Aktiengesellschaft and its subsidiaries, which comprise the consolidated income statement and statement of comprehensive income, the consolidated statement of financial position, the consolidated statement of cash flows, the consolidated statement of changes in equity and the notes to the consolidated financial statements for the business year from January 1, 2012 to December 31, 2012.

Board of Management's Responsibility for the Consolidated Financial Statements

The Board of Management of Bayer Aktiengesellschaft is responsible for the preparation of these consolidated financial statements. This responsibility includes that these consolidated financial statements are prepared in accordance with International Financial Reporting Standards, as adopted by the E.U., and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB ("Handelsgesetzbuch": German Commercial Code) and that these consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the group in accordance with these requirements. The Board of Management is also responsible for the internal controls as the Board of Management determines are necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW) and additionally observed the International Standards on Auditing (ISA). Accordingly, we are required to comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing audit procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The selection of audit procedures depends on the auditor's professional judgment. This includes the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In assessing those risks, the auditor considers the internal control system relevant to the entity's preparation of consolidated financial statements that give a true and fair view. The aim of this is to plan and perform audit procedures that are appropriate in the given circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Board of Management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Audit Opinion

According to § 322 Abs. 3 Satz (sentence) 1 HGB, we state that our audit of the consolidated financial statements has not led to any reservations.

In our opinion based on the findings of our audit, the consolidated financial statements comply, in all material respects, with IFRSs, as adopted by the E.U., and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and give a true and fair view of the net assets and financial position of the Group as at December 31, 2012 as well as the results of operations for the business year then ended, in accordance with these requirements.

REPORT ON THE COMBINED MANAGEMENT REPORT

We have audited the accompanying group management report of Bayer Aktiengesellschaft for the business year from January 1, 2012 to December 31, 2012, which is combined with the management report of the company. The Board of Management of Bayer Aktiengesellschaft is responsible for the preparation of the combined management report in accordance with the requirements of German commercial law applicable pursuant to § 315a Abs. 1 HGB. We conducted our audit in accordance with § 317 Abs. 2 HGB and German generally accepted standards for the audit of the combined management report promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). Accordingly, we are required to plan and perform the audit of the combined management report to obtain reasonable assurance about whether the combined management report is consistent with the consolidated financial statements and the audit findings, as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

According to § 322 Abs. 3 Satz 1 HGB, we state that our audit of the combined management report has not led to any reservations.

In our opinion based on the findings of our audit of the consolidated financial statements and combined management report, the combined management report is consistent with the consolidated financial statements, as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Essen, February 26, 2013

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Dr. Peter Bartels
Wirtschaftsprüfer

Anne Böcker
Wirtschaftsprüferin

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Governance Bodies

Supervisory Board

Members of the Supervisory Board held offices as members of the supervisory board or a comparable supervising body of the corporations listed (as at December 31, 2012 or the date on which they ceased to be members of the Supervisory Board of Bayer AG):

WERNER WENNING
Leverkusen, Germany
(born October 21, 1946)

Chairman of the Supervisory Board effective October 2012

Chairman of the Supervisory Board of Bayer AG and Chairman of the Supervisory Board of E.ON SE

Memberships on other supervisory boards:

- Deutsche Bank AG
- E.ON SE (Chairman)
- HDI V.a.G
- Talanx AG

Memberships in comparable supervising bodies of German or foreign corporations:

- Henkel AG & Co. KGaA (Member of the Shareholders' Committee)
- Freudenberg & Co. KG (Chairman of the Shareholders' Committee)

THOMAS DE WIN
Cologne, Germany
(born November 21, 1958)

Vice Chairman of the Supervisory Board, Member of the Supervisory Board effective April 2002

Chairman of the Bayer Group Works Council

Chairman of the Bayer Central Works Council

Memberships on other supervisory boards:

- Bayer MaterialScience AG

DR. PAUL ACHLEITNER
Munich, Germany
(born September 28, 1956)

Member of the Supervisory Board effective April 2002

Chairman of the Supervisory Board of Deutsche Bank AG

Memberships on other supervisory boards:

- Allianz Global Investors AG (until May 2012)
- Allianz Investment Management SE (Chairman of the Board of Directors) (until May 2012)
- Daimler AG
- Deutsche Bank AG (Chairman) (effective May 2012)
- RWE AG

Memberships in comparable supervising bodies of German or foreign corporations:

- Henkel AG & Co. KGaA (Member of the Shareholders' Committee)

ANDRÉ AICH
Berlin, Germany
(born February 17, 1969)

Member of the Supervisory Board until April 2012

Member of the Works Council of the Berlin site of Bayer

WILLY BEUMANN
Wuppertal, Germany
(born April 12, 1956)

Member of the Supervisory Board until April 2012

Chairman of the Works Council of the Elberfeld site of Bayer

Memberships on other supervisory boards:

- Bayer Pharma AG

DR. CLEMENS BÖRSIG
Frankfurt am Main, Germany
(born July 27, 1948)

Member of the Supervisory Board effective April 2007

Member of various supervisory boards

Memberships on other supervisory boards:

- Daimler AG
- Deutsche Bank AG (Chairman) (until May 2012)
- Linde AG

Memberships in comparable supervising bodies of German or foreign corporations:

- Emerson Electric Co.

ANDRÉ VAN BROICH
Dormagen, Germany
(born June 19, 1970)

Member of the Supervisory Board effective April 2012

Chairman of the Works Council of the Dormagen site of Bayer

Memberships on other supervisory boards:

- Bayer CropScience AG

THOMAS EBELING
Muri bei Bern, Switzerland
(born February 9, 1959)

Member of the Supervisory Board effective April 2012

Chief Executive Officer of ProSiebenSat.1 Media AG

DR.-ING. THOMAS FISCHER
Krefeld, Germany
(born August 27, 1955)

Member of the Supervisory Board effective October 2005

Chairman of the Group Managerial Employees' Committee of Bayer

Memberships on other supervisory boards:

- Bayer MaterialScience AG

PETER HAUSMANN
Winsen / Aller, Germany
(born February 13, 1954)

Member of the Supervisory Board effective April 2006

Member of the Executive Committee of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- Vivawest Wohnen GmbH

PROF. DR.-ING. E.H. HANS-OLAF HENKEL
Berlin, Germany
(born March 14, 1940)

Member of the Supervisory Board until April 2012

Honorary Professor at the University of Mannheim

Memberships on other supervisory boards:

- Continental AG
- Daimler Luft- und Raumfahrt Holding AG
- Heliad Equity Partners GmbH & Co. KGaA
- SMS Holding GmbH

Memberships in comparable supervising bodies of German or foreign corporations:

- Ringier AG

REINER HOFFMANN
Wuppertal, Germany
(born May 30, 1955)

Member of the Supervisory Board effective October 2006

North Rhine District Secretary of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- Evonik Services GmbH
- SASOL Germany GmbH

YÜKSEL KARAASLAN
Hohen Neuendorf, Germany
(born March 1, 1968)

Member of the Supervisory Board effective April 2012

Chairman of the Works Council of the Berlin site of Bayer

Vice Chairman of the Bayer Central Works Council

Memberships on other supervisory boards:

- Bayer Pharma AG

DR. RER. POL. KLAUS KLEINFELD
New York, U.S.A.
(born November 6, 1957)

Member of the Supervisory Board effective April 2005

Chairman and Chief Executive Officer of Alcoa Inc.

Memberships in comparable supervising bodies of German or foreign corporations:

- Member of the Board of Directors of Morgan Stanley (effective May 2012)

PETRA KRONEN
Krefeld, Germany
(born August 22, 1964)

Member of the Supervisory Board effective July 2000

Chairman of the Works Council of the Uerdingen site of Bayer

Memberships on other supervisory boards:

- Bayer MaterialScience AG (Vice Chairman)

DR. RER. NAT. HELMUT PANKE
Munich, Germany
(born August 31, 1946)

Member of the Supervisory Board effective April 2007

Member of various supervisory boards

Memberships in comparable supervising bodies of German or foreign corporations:

- Microsoft Corporation
- Singapore Airlines Limited
- UBS AG

SUE H. RATAJ
Sebastopol, U.S.A.
(born January 8, 1957)

Member of the Supervisory Board effective April 2012

Member of the Board of Directors (non-executive) of Cabot Corporation, Boston, U.S.A.

PETRA REINBOLD-KNAPE
Gladbeck, Germany
(born April 16, 1959)

Member of the Supervisory Board effective April 2012

Northeast District Secretary of the German Mining, Chemical and Energy Industrial Union

Memberships on other supervisory boards:

- envia Mitteldeutsche Energie AG
- Vattenfall Europe Generation AG
- Vattenfall Europe Business Services GmbH (until May 2012)

Memberships in comparable supervising bodies of German or foreign corporations:

- MDSE Mitteldeutsche Sanierungs- und Entsorgungsgesellschaft mbH

MICHAEL SCHMIDT-KIESSLING
Schwelm, Germany
(born March 24, 1959)

Member of the Supervisory Board effective April 2012

Vice Chairman of the Works Council of the Elberfeld site of Bayer

Memberships on other supervisory boards:

- Bayer Pharma AG

HUBERTUS SCHMOLDT
Soltau, Germany
(born January 14, 1945)

Member of the Supervisory Board until April 2012

Member of various supervisory boards

Memberships on other supervisory boards:

- Dow Olefinverbund GmbH (Vice Chairman)
- E.ON SE (until October 2012)
- RAG AG (Vice Chairman)
- RAG Deutsche Steinkohle AG (Vice Chairman)

DR. MANFRED SCHNEIDER
Cologne, Germany
(born December 21, 1938)

Chairman of the Supervisory Board until September 2012

Memberships on other supervisory boards:

- Linde AG (Chairman)
- RWE AG (Chairman)

PROF. DR.-ING. EKKEHARD D. SCHULZ
Krefeld, Germany
(born July 24, 1941)

Member of the Supervisory Board effective April 2005

Member of various supervisory boards

Memberships on other supervisory boards:

- AXA Konzern AG (until May 2012)
- MAN SE (Vice Chairman)
- RWE AG

DR. KLAUS STURANY*
Ascona, Switzerland
(born October 23, 1946)

Member of the Supervisory Board effective April 2007

Member of various supervisory boards

Memberships on other supervisory boards:

- Hannover Rückversicherung AG (Vice Chairman)
- Heidelberger Druckmaschinen AG (until August 2012)

Memberships in comparable supervising bodies of German or foreign corporations:

- Österreichische Industrieholding AG (until May 2012)
- Sulzer AG

ROSWITHA SÜSSELBECK
Leichlingen, Germany
(born March 19, 1954)

Member of the Supervisory Board until April 2012

Vice Chairman of the Works Council of the Leverkusen site of Bayer

Memberships on other supervisory boards:

- Bayer CropScience AG (Vice Chairman)

DIPL.-ING. DR.-ING. E.H. JÜRGEN WEBER
Hamburg, Germany
(born October 17, 1941)

Member of the Supervisory Board until April 2012

Chairman of the Supervisory Board of Deutsche Lufthansa AG

Memberships on other supervisory boards:

- Allianz Lebensversicherungs-AG
- Deutsche Lufthansa AG (Chairman)
- Voith GmbH
- Willy Bogner GmbH & Co. KGaA (Chairman)

Memberships in comparable supervising bodies of German or foreign corporations:

- Loyalty Partner GmbH (Chairman)
- Tetra Laval Group

PROF. DR. DR. H.C. MULT. ERNST-LUDWIG WINNACKER
Munich, Germany
(born July 26, 1941)

Member of the Supervisory Board effective April 1997

Secretary General of the Human Frontier Science Program, Strasbourg

Memberships on other supervisory boards:

- Medigene AG (Chairman)
- Wacker Chemie AG

OLIVER ZÜHLKE
Solingen, Germany
(born December 11, 1968)

Member of the Supervisory Board effective April 2007

Chairman of the Works Council of the Leverkusen site of Bayer

Chairman of the Bayer European Forum

Standing committees of the Supervisory Board of Bayer AG (as at Dec. 31, 2012)

PRESIDIAL COMMITTEE/ MEDIATION COMMITTEE
Wenning, (Chairman), Achleitner, Hausmann, de Win

AUDIT COMMITTEE
Sturany* (Chairman), Fischer, Hoffmann, Schulz, Wenning, de Win

HUMAN RESOURCES COMMITTEE
Wenning (Chairman), Achleitner, Kronen, Zühlke

NOMINATIONS COMMITTEE
Wenning (Chairman), Achleitner

* independent expert member pursuant to Section 100 Paragraph 5 of the German Stock Corporation Act (AktG)

HERMANN JOSEF STRENGER
Honorary Chairman of the Supervisory Board of Bayer AG, Leverkusen

Board of Management

Members of the Board of Management held offices as members of the supervisory board or a comparable supervising body of the corporations listed (as at December 31, 2012):

DR. MARIJN DEKKERS
(born September 22, 1957)

Chairman
(effective October 1, 2010)

Member of the Board of Management effective January 1, 2010, appointed until December 31, 2014

- Board of Directors of General Electric Company (since June 12, 2012)

WERNER BAUMANN
(born October 6, 1962)

Member of the Board of Management effective January 1, 2010, appointed until December 31, 2017

- Bayer Business Services GmbH (Chairman)
- Bayer CropScience AG (Chairman)

PROF. DR. WOLFGANG PLISCHKE
(born September 15, 1951)

Member of the Board of Management effective March 1, 2006, appointed until February 28, 2014

- Bayer MaterialScience AG (Chairman)
- Bayer Technology Services GmbH (Chairman)

DR. RICHARD POTT
(born May 11, 1953)

Member of the Board of Management effective May 1, 2002, appointed until May 31, 2013

Labor Director

- Bayer Chemicals AG (Chairman)
- Bayer HealthCare AG (Chairman)
- Bayer Pharma AG (Chairman)
- Currenta Geschäftsführungs-GmbH (Chairman)
- SCHOTT AG (effective November 1, 2012)

Organization Chart

[Graphic 5.1]

BAYER AG (HOLDING COMPANY)

Group Management Board



Marijn Dekkers
Chairman



Werner Baumann
Finance



Wolfgang Plischke
Technology, Innovation & Sustainability



Richard Pott*
Strategy & Human Resources
until May 31, 2013



Michael König
Member of Board of Management effective April 1, 2013**

Corporate Center

Corporate Office
P. Molan
Communications
M. Schade
Investor Relations
A. Rosar
Corporate Auditing
R. Meyer

Corporate Development
A. Moscho
Law, Patents, Compliance & Insurance
R. Hartwig
Regional Coordination
I. Paterson

Group Accounting & Controlling
U. Hauck
Finance
P. Müller
Taxes
B.-P. Bier
Mergers & Acquisitions
F. Rittgen

Environment & Sustainability
W. Grosse Entrup
Public & Governmental Affairs
D. Rennmann
Corporate Human Resources & Organization
H.-U. Groh

BUSINESS AREAS

Bayer HealthCare



W. Plischke (photo)
Chief Executive Officer***
M. Vehreschild
Chief Financial Officer
D. Ehle
Animal Health
E. L. Mann
Consumer Care
A. Main
Medical Care
A. Fibig
Pharmaceuticals
A. Busch
Global Drug Discovery
K. Malik
Global Development
H. Klusik*
Product Supply
N. Sheail
Global Business Development & Licensing
S. Gehring
General Counsel
A. Günther
Human Resources
O. Renner
Communications and Public Affairs

Bayer CropScience



L. Condon (photo)
Chief Executive Officer
M. A. Schulz
Chief Financial Officer
L. van der Broek
Chief Operating Officer
M. Haug
Human Resources
S. Kurzawa
Communications
G. Marchand
General Counsel
C. D. Nicholson
Research & Development
A. Noack
Product Supply
G. Riemann
Environmental Science
R. Scheitza*
Strategy & Business Management

Bayer MaterialScience



P. Thomas (photo)
Chief Executive Officer
A. Steiger-Bagel
Chief Financial Officer
T. Van Osselaer
Industrial Operations
M. König (until March 31)
Polycarbonates
J. Wolff
Polyurethanes
D. Meyer
Coatings, Adhesives, Specialties
W. Miebach
Corporate Development
M. Bernhardt*
Human Resources
R. Northcote
Communications and Public Affairs

* Labor Director
** As of June 1, 2013, Michael König will serve as member of the Board of Management with responsibility for human resources and as Labor Director. In connection with the reorganization of the Board of Management, Chairman Dr. Marijn Dekkers will assume responsibility for strategy as of June 1, 2013.

SERVICE AREAS

Bayer Business Services



Executive Board
D. Hartert (photo)
Chairman
W. Oehlschläger*

Bayer Technology Services



D. Van Meirvenne
Managing Director

Currenta



Executive Board
G. Hilken (photo)

Glossary

A

A1CNow+™ User-friendly device for measuring the long-term blood glucose level HbA1c at doctors' offices and diabetes outreach clinics

Adalat™ Drug product for the treatment of hypertension; active ingredient: nifedipine

Advantage™ product line (Advantix™ and other brands) Flea and tick control product for dogs and cats; active ingredient: imidacloprid

Aleve™/Apronax™/Flanax™ Analgesic; active ingredient: naproxen

Alion™ Herbicide; active ingredient: indaziflam; mainly used in plantation crops and sugarcane

Alka-Seltzer™ Drug product that reduces pain and fever

Angeliq™ Drug product for the treatment of menopause symptoms; active ingredients: drospirenone and estradiol

Antacids Drug products to treat heartburn and acid-related stomach complaints

Arize™ Hybrid rice seed

Aspirin™ World-famous analgesic; active ingredient: acetylsalicylic acid

Aspirin™ Cardio Drug product for protection against heart attack; active ingredient: acetylsalicylic acid

Avalox™/Avelox™ Drug product for the treatment of respiratory tract infections; active ingredient: moxifloxacin

B

Basta™ Herbicide; active ingredient: glufosinate-ammonium; mainly used in plantation crops, potatoes and vegetables

Bayblend™ Brand name for polymer blends based on polycarbonate and acrylonitrile butadiene styrene

Baycox™ Drug product to control coccidiosis, a parasitic infectious disease in young livestock; active ingredient: toltrazuril

Bayer Garden™/Bayer Advanced™ Umbrella brands for consumer home and garden products

Bayer Garden™ Permaclean Residual action herbicide with a two-way mode of action; active ingredients: glyphosate, flufenacet and metosulam; mainly used to control weeds and prevent the germination of unwanted grass and weed seeds

Bayflex™ RIM Lightweight polyurethane system for particularly lightweight automotive construction; with a density of only 0.9 kilograms per liter, the material is even lighter than water and enables a reduction of up to 30 percent in the weight of finished parts.

Baytherm™ Microcell Polyurethane insulation system based on microcellular foam, which enables even better thermal insulation of refrigerators than before and also increases the cost efficiency of appliance production

Baytril™ Drug for the treatment of severe veterinary infections; active ingredient: enrofloxacin

Belt™ Insecticide; active ingredient: flubendiamide; mainly used in vegetables, soybeans, cotton and rice

Bepanthen™ Range of skincare and wound-healing products; active ingredient: dexpanthenol

Bepanthol™ Range of care products for dry, irritated skin; value-adding ingredient: panthenol

Berocca™ Dietary supplement containing B-group vitamins, vitamin C and minerals

Betaferon™/Betaseron™ Drug product for the treatment of multiple sclerosis (MS); active ingredient: interferon beta-1b

Breeze™ Blood glucose meter for people with diabetes for simple, safe and rapid use at home or while traveling

C

Canesten™ Antifungal medication to treat skin infections; active ingredient: clotrimazole or bifonazole

Capital invested (CI) Capital invested comprises the assets on which the company must obtain a return by generating an appropriate cash inflow; in some cases the cost of ultimately reproducing the assets must be earned in addition.

Capreno™ Herbicide; active ingredient: thiencarbazone-methyl; mainly used in corn

Cash flow return on investment (CFROI) The CFROI is the ratio between the gross cash flow in the period and the cost of reproducing depletable assets, divided by the capital invested. The CFROI is thus a measure of the return on capital employed in the period.

Cash value added (CVA) This is the difference between the gross cash flow and gross cash flow hurdle. It is therefore the amount by which the gross cash flow exceeds the return and reproduction requirements. If CVA is positive, the investors' return and reproduction requirements have been satisfied and value has been created for the company.

Cipro™/Ciprobay™/ Ciproxin™/ Baycip™ Drug product for the treatment of infectious diseases; active ingredient: ciprofloxacin

Confidor™ Insecticide; active ingredient: imidacloprid; mainly used in rice, fruit and vegetables, and potatoes

Contour™ Line of blood glucose meters for people with diabetes for simple, safe and rapid use at home or while traveling; includes Contour™, Contour™ XT, Contour™ Plus and Contour™ Next USB

Core earnings per share (core EPS) Core earnings per share comprise core net income divided by the weighted average number of issued ordinary shares. Core net income is computed from EBIT plus amortization and impairment losses on intangible assets and impairment losses on property, plant and equipment, plus special items (other than amortization and impairments), minus financial result, minus income taxes, minus tax effects related to amortization, impairments and special items, minus income after taxes attributable to non-controlling interest. Core earnings per share are not defined in the International Financial Reporting Standards. The company considers that this indicator gives readers a clearer picture of the results of operations and ensures greater comparability of data over time.

Corporate compliance comprises the observance of statutory and company regulations on lawful and responsible conduct by the company, its employees, and its management and supervisory bodies.

Corporate governance comprises the long-term management and oversight of the company in accordance with the principles of responsibility and transparency. The German Corporate Governance Code sets out basic principles for the management and oversight of listed companies.

Corvus™ Herbicide; active ingredient: thiencarbazone-methyl; mainly used in corn

Credit default swaps (CDS) Credit default swaps are tradable insurance contracts used to hedge against the default of a borrower.

D

Delta cash value added (delta CVA) Delta CVA is the difference between the CVAs of two consecutive periods. A positive delta CVA shows that a unit has created more value or destroyed less value in the second period than in the first.

Desmodur™ Brand name for various isocyanates

Desmopan™ Brand name for thermoplastic polyurethanes

Desmophen™ Brand name for various polyesters and polyols used in the manufacture of polyurethanes

Diane™ Treatment of androgen-dependent diseases, such as acne (when resistant to other therapies), especially if associated with very oily skin (seborrhea), development of excessive facial and body hair (hirsutism), male-pattern baldness and hair loss caused by excessive androgen action (androgenic alopecia) in women who desire oral contraception; active ingredients: cyproterone acetate and ethinyl estradiol

Drontal™ product line Dewormers for dogs and cats; active ingredients: combinations of praziquantel, pyrantel and febantel

Durazone™ Herbicide; active ingredient: indaziflam; mainly used by non-professional customers to control weeds and grasses

E

EBIT EBIT comprises earnings before financial result and taxes.

Earnings before interest, taxes, depreciation and amortization (EBITDA) EBIT plus amortization and impairment losses on intangible assets and depreciation and impairment losses on property, plant and equipment, minus impairment loss reversals. EBITDA, EBITDA before special items and the underlying EBITDA margin are not defined in the International Financial Reporting Standards. The company considers EBITDA before special items to be a more suitable indicator of operating performance since it is not affected by depreciation, amortization, impairments or special items. By reporting this indicator, the company aims to give readers a clearer picture of the results of operations and ensure greater comparability of data over time.

Earnings per share (EPS) EPS is calculated by dividing Group net income by the weighted average number of shares as defined in IAS 33.

EcoCommercial Building Program Innovative, globally aligned business model for a range of integrated energy and material solutions culminating in the zero-emissions building. This model has been included in the Sustainable Buildings & Climate Initiative (SBCI) of UNEP and forms part of Bayer's Sustainability Program. Bayer MaterialScience has recently expanded the program into a development network to better leverage innovative ideas through closer collaboration with network partners.

Emesto™ Fungicide; active ingredient: penflufen; mainly used as a seed treatment in potatoes

EMTN program The multi-currency European Medium Term Notes (EMTN) program is a documentation platform that enables Bayer to raise capital by quickly issuing debt on the global capital market. Securities issued under this program may be listed in Luxembourg if needed. Their maturities, currencies and conditions can be designed very flexibly.

EQ-Top™ Solution developed jointly by Bayer MaterialScience (BMS), Günther Kast GmbH and Karlsruhe Institute of Technology (KIT) for increasing earthquake protection in buildings. The concept uses a specialty adhesive based on polyurethane raw materials from BMS to firmly attach glass fiber fabric to building walls, thereby strengthening them over a large area.

Esplanade™ Herbicide with a broad spectrum of action; active ingredient: indaziflam; mainly used by professional customers in forestry and industrial vegetation management

EverGol™ Fungicide; active ingredient: penflufen; mainly used as a seed treatment in soybeans, corn, cereals, canola, cotton and rice

Eylea™/Eylia™ is a recombinant fusion protein consisting of parts of human VEGF receptors 1 and 2 extracellular domains fused to the Fc portion of human IgG1 and formulated as an iso-osmotic solution for intravitreal administration. It acts as a soluble decoy receptor that binds to VEGF-A and placental growth factor (PLGF) with a higher affinity than their natural receptors and can therefore inhibit the binding and activation of these cognate VEGF receptors.

F

FiberMax™ Cotton seed

Flexyess™ Oral contraceptive with a flexible extended regimen and an innovative digital dosing system named Clyk™; active ingredients: ethinyl estradiol and drospirenone

Fox™ Fungicide; active ingredients: trifloxystrobin and prothioconazole; mainly used in soybeans and corn

G

Gadavist™/Gadovist™ Contrast agent for magnetic resonance imaging of the central nervous system, liver and kidneys; active ingredient: gadobutrol

Gaucho™ Insecticide; active ingredient: imidacloprid; mainly used as a seed treatment in sugar beet, corn, cereals, cotton and canola

Global commercial paper program Commercial paper (CP) issued under Bayer's program is a short-term, unsecured debt instrument normally issued at a discount and redeemed at nominal value. It is a flexible way of obtaining short-term funding on the capital market. The commercial paper program allows the company to issue commercial paper on both the U.S. and European markets.

Glucobay™ Drug product for the treatment of diabetes; active ingredient: acarbose

GlyTol™ Herbicide tolerance trait; mainly used in cotton

Gross cash flow (GCF) The gross cash flow comprises income after taxes, plus income taxes, plus financial result, minus income taxes paid or accrued, plus depreciation, amortization and impairment losses, minus impairment loss reversals, plus / minus changes in pension provisions, minus gains / plus losses on retirements of noncurrent assets, minus gains from the remeasurement of already held assets in step acquisitions. The change in pension provisions includes the elimination of non-cash components of EBIT. It also contains benefit payments during the year.

Gross cash flow hurdle The GCF hurdle is the gross cash flow that needs to be generated to satisfy investors' return and reproduction requirements.

H

HDI Hexamethylene diisocyanate, a raw material for polyurethane coatings

Hybrid bond A hybrid bond is a corporate bond with equity-equivalent properties, usually with either no maturity date or a very long maturity. Due to its subordination, issuer bankruptcy carries a lower likelihood of repayment than a normal bond.

I

InVigor™ Summer canola seed

Iopamiron™ Non-ionic intravascular contrast agent for all common X-ray analyses

J

Jetstream™ Thrombectomy system for the removal of plaques (thrombi) in arteries

K

Key performance indicators (KPI) Indicators used to evaluate the attainment of targets by the company

Kinzal™ Drug product for the treatment of hypertension; active ingredient: telmisartan

Kogenate™ Drug product for the treatment of hemophilia; active ingredient: recombinant Factor VIII

L

Levitra™ Drug product for the treatment of erectile dysfunction; active ingredient: vardenafil

Liberty™ Herbicide; active ingredient: glufosinate-ammonium; mainly used in genetically modified crops (cotton, canola, soybeans and corn)

LifeNet™ Nets based on a polypropylene fiber incorporating the active ingredient deltamethrin, to protect people from malaria mosquitoes

Life Sciences Field of activities comprising particularly agriculture and health care. At Bayer this refers to the activities of the CropScience and HealthCare subgroups.

LSC-12 Intrauterine contraceptive system; active ingredient: levonorgestrel

Luna™ Fungicide; active ingredient: fluopyram; mainly used in fruit, vegetable and potato crops

M

Magnevist™ Contrast agent for MRI diagnosis of the central nervous system and body; active ingredient: gadopentetate dimeglumine

Makroblend™ Brand name for polymer blends of polycarbonate and either polybutylene terephthalate or polyethylene terephthalate

Makrolon™ Brand name for polycarbonate

MDI Diphenylmethane diisocyanate, an important raw material for rigid polyurethane foam used in thermal insulation

Mirena™ Intrauterine contraceptive; active ingredient: levonorgestrel

Movento™ Insecticide; active ingredient: spirotetramat; mainly used in fruit and vegetables, grapes, cotton and soybeans

N

Natazia™/Qlaira™ Oral contraceptive whose estrogen component is based on estradiol; active ingredients: estradiol valerate and dienogest

Nativo™ Fungicide; active ingredients: trifloxystrobin and tebuconazole; mainly used in cereals, soybeans, corn and rice

Natria™ Product line in the Bayer Garden™ range of consumer products; based on natural or nature-derived active ingredients

Net cash flow Net cash flow is the cash flow from operating activities as defined in IAS 7.

Nexavar™ Cancer drug to treat patients with hepatocellular carcinoma or advanced renal cell carcinoma; active ingredient: sorafenib

Nortica™ Biological agent based on Bacillus firmus to protect against nematodes; main applications: lawns and golf courses

Nunhems™ Umbrella brand for the vegetable seed business

O

One A Day™ Multivitamin product

Over the Counter (OTC) The trading of securities outside of an organized exchange. OTC transactions are nevertheless subject to securities trading laws. In the health care field, OTC medicines are those obtainable without a prescription.

P

Poncho™ Insecticide; active ingredient: clothianidin; mainly used as a seed treatment in corn, canola, sugar beet and cereals

Price / cash flow ratio The price / cash flow ratio is the ratio of the share price to gross cash flow per share. It shows how long it would take for the company's cash flow to cover the share price.

Price / EPS ratio (price / earnings ratio) This is the ratio of the current share price to earnings per share. A high price / EPS ratio indicates that the market assigns a high value to the stock in the expectation of future earnings growth.

Pritor™ Drug product for the treatment of hypertension; active ingredient: telmisartan

Procox™ Parasiticide for the combined treatment of roundworm infections and gastrointestinal coccidiosis in dogs; active ingredients: emodepsid and toltrazuril

Prosaro™ Fungicide; active ingredients: prothioconazole and tebuconazole; used mainly in cereals and canola

Q

Qlaira™ Oral contraceptive whose estrogen component is based on estradiol; additional indication in the E.U. and Canada for the treatment of heavy menstrual bleeding in women without organic pathology who desire oral contraception; active ingredients: estradiol valerate, dienogest

R

Radium-223 dichlorid Development compound for the treatment of cancer that has already formed "daughter tumors" (metastases) in the bones. The substance is a so-called "alpha-pharmaceutical" that emits radioactive alpha particles and thus selectively targets cancer cells in the bones; active ingredient: radium-223 dichloride

Redoxon™ Vitamin product containing vitamin C and zinc

Regorafenib Novel oral multikinase inhibitor that demonstrated an ability in preclinical development to block certain signal pathways in tumor growth and has been investigated in clinical development in the treatment of advanced colorectal cancer and gastrointestinal stromal tumors (GIST)

Rennie™ Medicine to treat heartburn and acid-related stomach disorders; active ingredients: calcium carbonate and magnesium carbonate

Riociguat Active ingredient from a new class of vasodilative substances; stimulates soluble guanylate cyclase (sGC), an enzyme. Registration applications have been filed in the United States and the European Union for chronic thromboembolic pulmonary hypertension (CTEPH) and pulmonary arterial hypertension (PAH).

S

Sakura™ Herbicide; active ingredient: pyroxasulfone; mainly used in wheat and triticale

Seresto™ Flea and tick collar for dogs and cats; active ingredients: imidacloprid and flumethrin

Sivanto™ Insecticide; active ingredient: flupyradifurone; mainly used in fruit and vegetables

Skyla™ Novel low-dose intrauterine contraceptive system; active ingredient: levonorgestrel

Specticle™ Herbicide; active ingredient: indaziflam; mainly for lawncare by professional users

Stivarga™ Novel oral multikinase inhibitor that demonstrated an ability in preclinical development to block certain signal pathways in tumor growth. Stivarga™ has been approved by the FDA for therapy of metastatic colorectal cancer (MCRC); active ingredient: regorafenib

Stoneville™ Cotton seed

Supradyn™ Dietary supplement (B-group vitamins with niacin, vitamin C and iron)

Syndicated credit facility Credit line agreed with a group of banks. Generally used for extensive financing requirements, such as when making an acquisition, to increase available liquidity or as security for the issuance of debt instruments. The credit facility can be utilized and repaid flexibly, either in full or in portions, during its term.

T

Talcid™ Antacid to treat heartburn and stomach complaints; active ingredient: hydrotalcite

TDI Toluene diisocyanate, an important raw material for flexible polyurethane foam used in upholstery, mattresses and car seats

TwinLink™ Dual insecticide resistance and herbicide tolerance trait; mainly used in cotton

U

Ultravist™ Contrast agent for X-ray examinations including computed tomography; active ingredient: iopromide

V

ViviTouch™ Brand name for actuators based on electroactive polymers that are used to provide high-definition tactile feedback, e.g. in mobile gaming consoles

Votivo™ Biological agent based on Bacillus firmus to protect against nematodes, mainly used as a seed treatment in combination with Poncho™ in corn, soybeans and cotton

Vulkollan™ Brand name for a high-performance polyurethane elastomer

W

Weighted average cost of capital (WACC) The weighted average cost of capital (WACC) represents the return expected by investors on the capital invested in the company. It is computed as a weighted average of the cost of equity and debt. The cost of equity is derived from capital market information and represents the return expected by stockholders, while the cost of debt represents the conditions at which the company can borrow money over the long term.

White & Black™ Cough and cold medicine

World-scale production facility Very large production facility that allows substantial economies of scale

X

Xarelto™ Direct Factor Xa inhibitor in tablet form. The active ingredient rivaroxaban is being developed to prevent or treat thrombosis in a wide range of venous and arterial indications and has received marketing approvals under the name Xarelto™ for stroke prevention in patients with atrial fibrillation, among other indications.

Xpro™ Fungicide; active ingredients: bixafen and prothioconazole; mainly used in cereals

Y

YAZ™/Yasmin™/Yasminelle™ Oral contraceptives; active ingredients: ethinyl estradiol and drospirenone

Z

Zetia™ Cholesterol-lowering drug from Merck & Co., co-marketed by Bayer in Japan; active ingredient: ezetimib

INTERNET

For explanations of further specialist terminology, go to: WWW.INVESTOR.BAYER.COM

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Global Commitment to Sustainability

Sustainability at Bayer is an integral part of a corporate policy geared to long-term success and innovative solutions. This commitment is also evidenced by the company's participation in numerous initiatives and projects around the world. Logos relating to a selection of these activities appear in the left margin in the order in which the respective activities are described below.

Bayer has long practiced the concept of Responsible Care™. To achieve continuous improvement in the areas of health, safety and environment, the company has been guided by the principles of the voluntary Responsible Care initiative of the chemical and pharmaceutical industry since 1994 and by the Responsible Care Global Charter, which was last revised in 2006.

A member of the World Business Council for Sustainable Development since 1997, Bayer was a co-founder of German industry's sustainable development forum "econsense" in 2000.

Bayer is a founding member of the United Nations Global Compact (UNGC) initiative, also established in 2000, actively promoting the 10 principles of the UNGC – for example through its involvement in the corporate sustainability leadership platform LEAD and the "Caring for Climate" and "CEO Water Mandate" initiatives.

Bayer's collaboration with the United Nations Environment Programme (UNEP) has been in place since 2004 and has set standards in public-private partnerships. Among the long-standing joint activities is the "Bayer Young Environmental Envoy" program, in which young people from 19 countries on three continents participate.

To help reduce greenhouse gas emissions from relevant buildings worldwide, Bayer is also supporting the Sustainable Buildings and Climate Initiative of the United Nations Environment Programme (UNEP SBCI) as part of its EcoCommercial Building Program.

The company places maximum importance on climate protection. Bayer has been included for the eighth time in succession in the Carbon Disclosure Leadership Index (CDLI) published by the Carbon Disclosure Project (CDP), an organization run on behalf of institutional investors, and since 2010 has also been included in the CDP's Carbon Performance Leadership Index (CPLI).

For more than 50 years, Bayer has supported family planning programs in over 130 countries, focusing on cooperation with private and public relief organizations such as the United Nations Population Fund (UNFPA) and the United States Agency for International Development (USAID). As part of a new initiative, Bayer has offered contraceptives at reduced prices in Sub-Saharan Africa since 2010. Activities in the area of family planning also include educating teenagers on sexuality and health issues. In Uganda, for example, Bayer cooperates with the German Foundation for World Population (DSW) in this field. In the fight against tuberculosis, Bayer is cooperating with the Global Alliance for TB Drug Development, a U.S. non-profit organization, with the aim of developing a new treatment that reduces treatment times.

Bayer is represented in major stock indices and investment funds that focus on companies pursuing responsible and sustainable corporate strategies. For example, Bayer is listed in the Dow Jones Sustainability Indices Europe and World, the FTSE4Good index series, the Advanced Sustainable Performance Indices (ASPI) Eurozone and the NYSE Euronext Low Carbon Europe 100 Index.

Our sustainability reporting is based on the guidelines of the Global Reporting Initiative (GRI), which Bayer supports as an organizational stakeholder.

The Bayer Group

Bayer

Bayer AG defines common values, goals and strategies for the entire Group. The subgroups and service companies operate independently, led by the management holding company. The Corporate Center supports the Group Management Board in its task of strategic leadership.



Bayer HealthCare

Bayer HealthCare is among the world's foremost innovators in the field of pharmaceutical and medical products. This subgroup's mission is to research, develop, manufacture and market innovative products that improve the health of people and animals throughout the world. Read more on page 68ff.



Bayer CropScience

Bayer CropScience offers its customers an outstanding range of products including high-value seeds, innovative crop protection solutions based on chemical and biological modes of action, and extensive service backup for modern, sustainable agriculture. Another core area is non-agricultural applications. Read more on page 74ff.



Bayer MaterialScience

Bayer MaterialScience is a renowned supplier of high-tech polymers and develops innovative solutions for a broad range of applications relevant to everyday life. Products holding leading positions on the world market account for a large proportion of its sales. Read more on page 77ff.

Service companies

Bayer Business Services is the Bayer Group's global competence center for IT and business services. Its portfolio is focused on services in the core areas of IT infrastructure and applications, procurement and logistics, human resources and management services, and finance and accounting.

Bayer Technology Services, the global technological backbone and a major innovation driver of the Bayer Group, is engaged in process development and in process and plant engineering, construction and optimization. BTS is the gateway to the Bayer Group for young engineers.

Currenta offers services for the chemical industry including utility supply, waste management, infrastructure, safety, security, analytics and vocational training.

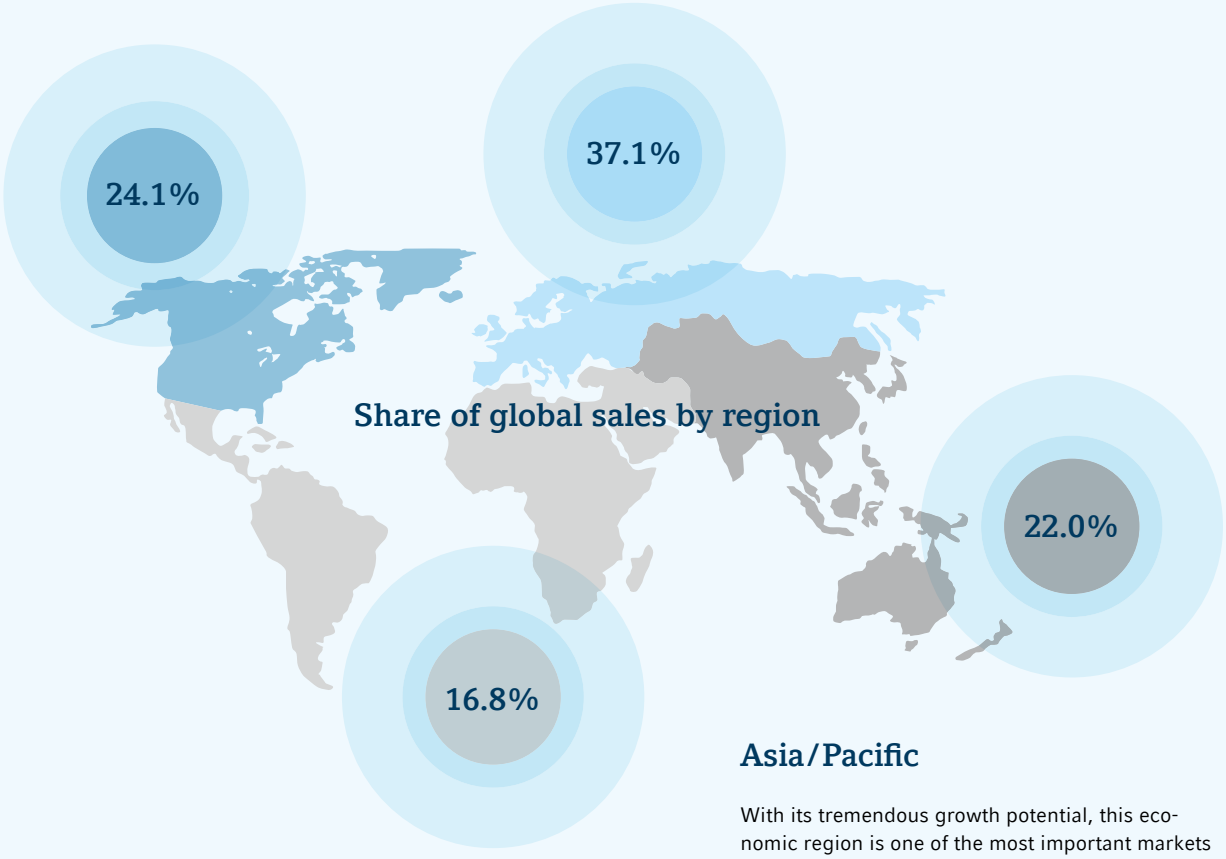
At Home Throughout The World

North America

In North America (United States and Canada), Bayer is represented in all strategic business areas. In 2012 Bayer's 15,300 employees in this region generated sales of €9.6 billion.

Europe

In 2012 Bayer achieved sales of €14.7 billion in the European market. Numerous major production facilities and 52,300 employees (of whom 34,600 are based in Germany) give the company a strong presence in this region.



Asia/Pacific

With its tremendous growth potential, this economic region is one of the most important markets of the future. In 2012 Bayer generated €8.8 billion in sales here with 26,700 employees.

Latin America/Africa/Middle East

Bayer has been present in Latin America for more than 110 years. In 2012 the company's 16,200 employees in the Latin America/Africa/Middle East region generated €6.7 billion in sales.

Five-Year Financial Summary

[Table 1.2]

	2008	2009	2010	2011	2012
	€ million	€ million	€ million	€ million	€ million
Bayer Group					
Sales	32,918	31,168	35,088	36,528	39,760
Sales outside Germany	85.4%	86.7%	87.4%	87.3%	88.3%
EBIT[1]	3,544	3,006	2,730	4,149	3,960
EBIT before special items[2]	4,342	3,772	4,452	5,025	5,671
EBITDA[2]	6,266	5,815	6,286	6,918	6,920
EBITDA before special items[2]	6,931	6,472	7,101	7,613	8,284
Income before income taxes	2,356	1,870	1,721	3,363	3,248
Income after taxes	1,724	1,359	1,310	2,472	2,496
Earnings per share (€)[3]	2.22	1.70	1.57	2.99	2.96
Noncurrent assets	**35,351**	**34,049**	**33,188**	**32,697**	**32,350**
of which goodwill and other intangible assets	22,598	21,546	20,163	19,455	18,757
of which property, plant and equipment	9,492	9,409	9,835	9,823	9,863
Current assets	**17,152**	**16,993**	**18,318**	**20,068**	**18,986**
Inventories	6,681	6,091	6,104	6,368	6,980
Receivables and other current assets	8,377	8,177	9,374	11,846	10,311
Cash and cash equivalents	2,094	2,725	2,840	1,770	1,695
Financial liabilities	**16,870**	**12,949**	**11,833**	**11,679**	**9,532**
Noncurrent	10,614	11,460	9,944	7,995	6,962
Current	6,256	1,489	1,889	3,684	2,570
Interest expense – net	(702)	(548)	(499)	(335)	(252)
Return on equity	10.4%	7.7%	6.9%	13.0%	13.2%
Gross cash flow[4]	5,295	4,658	4,771	5,172	4,599
Capital expenditures (total)	1,982	1,669	1,621	1,666	2,012
Depreciation and amortization	2,570	2,660	2,571	2,521	2,613
Personnel expenses (including pension expenses)	7,491	7,776	8,099	8,726	9,203
Number of employees[5] (Dec. 31)	108,600	111,000	111,400	111,800	110,500
Research and development expenses	2,653	2,746	3,053	2,932	3,013
Equity including non-controlling interest (total)	**16,340**	**18,951**	**18,896**	**19,271**	**18,569**
Capital stock	1,957	2,117	2,117	2,117	2,117
Reserves	14,383	16,834	16,779	17,154	16,452
Net income	1,719	1,359	1,301	2,470	2,446
Non-controlling interest	77	54	63	59	100
Liabilities (total)	**36,171**	**32,091**	**32,610**	**33,494**	**32,767**
Total assets	**52,511**	**51,042**	**51,506**	**52,765**	**51,336**
Equity ratio	**31.1%**	**37.1%**	**36.7%**	**36.5%**	**36.2%**
Bayer AG					
Net income	1,161	2,226	1,245	1,125	889
Allocation to (withdrawal from) retained earnings	91	1,068	5	(239)	(682)
Total dividend payment	1,070	1,158	1,240	1,364	1,571
Dividend per share (€)	1.40	1.40	1.50	1.65	1.90

[1] EBIT = earnings before financial result and taxes
[2] For definition see Combined Management Report, Chapter 7.2 "Calculation of EBIT(DA) Before Special Items."
[3] Earnings per share as defined in IAS 33 = net income divided by the average number of shares. For details see Note [16] to the consolidated financial statements.
[4] For definition see Combined Management Report, Chapter 7.5 "Liquidity and Capital Expenditures of the Bayer Group."
[5] Full-time equivalents

Financial Calendar

Q1 2013 Interim Report	**April 25, 2013**
Annual Stockholders' Meeting 2013	**April 26, 2013**
Planned dividend payment date	**April 29, 2013**
Q2 2013 Interim Report	**July 31, 2013**
Q3 2013 Interim Report	**October 31, 2013**
2013 Annual Report	**February 28, 2014**
Q1 2014 Interim Report	**April 28, 2014**
Annual Stockholders' Meeting 2014	**April 29, 2014**

MASTHEAD

Publisher
Bayer AG, 51368 Leverkusen,
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Editor
Jörg Schäfer, phone +49 214 30 39136
email: joerg.schaefer@bayer.com

Investor Relations
Peter Dahlhoff, phone +49 214 30 33022
email: peter.dahlhoff@bayer.com

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Forward-Looking Statements
This Annual Report contains forward-looking statements based on current assumptions and forecasts made by Bayer Group or subgroup management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual financial position, development or performance of the company and the estimates given here. These factors include those discussed in Bayer's public reports, which are available on the Bayer website at www.bayer.com. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

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